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THE
COLOR MIXER:

CONTAINING NEARLY

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FOR

COLORS, PASTES, ACIDS, PULPS, BLUE VATS,
LIQUORS, ETC. ETC.,

FOR

COTTON AND WOOLLEN GOODS,

INCLUDING THE

CELEBRATED BARROW DELAINE COLORS.

BY
✓
JOHN SELLERS,
"AN EXPERIENCED PRACTICAL WORKMAN."

PHILADELPHIA:
HENRY CAREY BAIRD,
INDUSTRIAL PUBLISHER,
406 Walnut Street.

1865.

✓

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P R E F A C E .

THE author, in presenting this volume to the trade, of which he is a member, would simply remark that he has aimed to make it purely practical, the receipts here given having resulted from a long-continued practice. None of these receipts having been included in this volume without previously undergoing this test, with success, he feels certain that, well prepared, they must prove valuable to all who are engaged in the business.

October 1, 1865.

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COLOR MIXER.

No. 1.

1 ACID.

MADDER.

2½ gallons Lemon Juice 60° Twaddle

1 gallon Caustic Soda 74° “

5 lbs. No. 3 Gum Subte. heated 180° F.

Add 3 gallons of Subte. Water.

Mix and strain.

No. 2.

2 ACID.

MADDER.

3 gallons Lemon Juice 60° Twaddle

1 gallon Caustic Soda 70° “

8 gallons Subte. Water.

Mix and strain.

No. 3.

3 ACID.

MADDER.

3 gallons Lemon Juice 60° Twaddle

1 gallon Caustic Soda 70° “

Mix and strain.

No. 4.

5 ACID.

MADDER.

1½ gallon Lemon Juice 60° Twaddle

½ “ Caustic Soda 70° “

10 gallons Subte. Water.

Mix and strain.

No. 5.

10 ACID.

MADDER.

2 gallons Lemon Juice 60° Twaddle

8 “ Subte. Water.

Mix and strain.

No. 6.

12 ACID.

MADDER.

2 gallons Lemon Juice 60° Twaddle

6 " Subte. Water.

Mix and strain.

No. 7.

31 ACID.

MADDER.

12 gallons Lemon Juice 60° Twaddle

4 " Caustic Soda 70° "

36 lbs. No. 3 Gum Subte. heated 180° F.

Mix and strain.

No. 8.

3 CHOCOLATE.

MADDER.

1½ gallon Water

1½ " Red Liquor 16° Twaddle

1 " Iron Liquor 24° "

6 lbs. of Flour or Starch.

Boil and strain.

16

COLOR MIXER.

No. 9.

4 CHOCOLATE.

MADDER.

2 gallons Water
2 " Red Liquor 16° Twaddle
1 gallon Iron Liquor 24° "
10 lbs. Starch.
Boil and strain.

No. 10.

5 CHOCOLATE.

MADDER.

2½ gallons Water
2½ " Red Liquor 16° Twaddle
1 gallon Iron Liquor 14° "
12 lbs. New Flour.
Boil and strain.

No. 11.

6 CHOCOLATE.

3 gallons Water
3 " Red Liquor 16° Twaddle
1 gallon Iron Liquor 24° "
Thicken, boil, and strain.

No. 12.

8 CHOCOLATE.

4 gallons Water

4 " Red Liquor 16° Twaddle

1 gallon Iron Liquor 24° "

Thicken, boil, and strain.

12 CHOCOLATE, 15 CHOCOLATE, 20 CHOCOLATE, 24 CHOCOLATE, 30 CHOCOLATE, and 40 CHOCOLATE, prepared on the same principle.

No. 13.

RED for GUM CHOCOLATE.

4 gallons Red Liquor 16° Twaddle.

8 lbs. ground Gum Senegal.

Dissolve warm, and strain.

No. 14.

2 GUM CHOCOLATE.

1 gallon Red standard

1 " Iron Liquor 24° Twaddle

1 " Gum Water.

Mix and strain.

No. 15.

4 GUM CHOCOLATE.

MADDER.

2 gallons Red standard
1 gallon Iron Liquor 24° Twaddle
2 gallons Gum Water.
Mix and strain.

No. 16.

NEW BLACK.

MADDER.

2 gallons Red Liquor 16° Twaddle
2 " Iron Liquor 24° "
4 " Water
12 lbs. Starch.
Boil and strain.

No. 17.

10 BLACK.

MADDER.

3 gallons Iron Liquor 24° Twaddle
4 " Water
14 lbs. Starch.
Boil and strain.

No. 18.

4 V. BLACK.

MADDER.

3 gallons Water

1 gallon Iron Liquor 24° Twaddle

8 lbs. Starch.

Boil and strain.

No. 19.

G. BLACK.

MADDER.

2 gallons Water

2 " Logwood Liquor 8° Twaddle

5 " Pyroligneous Acid 6° "

2 " Iron Liquor 24° Twaddle

12 lbs. Starch.

Boil and strain.

No. 20.

4 LBS. CATECHU STANDARD.

120 gallons Water

400 lbs. Catechu

Boil 8 hours by fire and measure to 90 gallons; and add

10 gallons Acetic Acid for Brown.

Let settle all night. Use clear liquor standard 24° Twaddle.

No. 21.

SAL AMMONIAC LIQUOR.

96 gallons Water

4 lbs. Catechu standard

192 lbs. Sal Ammoniac.

Dissolve at 212° F., and let settle all night.
Use clear liquor.

No. 22.

GUM BROWN STANDARD.

460 lbs. Gum Senegal.

Dissolve 80 gallons of Sal Ammoniac standard; heat, and let stand over night.

No. 23.

DARK 7 BROWN.

MADDER.

4 gallons Gum Brown

1 gallon Acetate of Copper 16° Twaddle.

Mix and strain.

No. 24.

41 OLD BROWN.

MADDER.

8 gallons Gum Brown
 1 gallon Acetic Acid for Brown
 1 gallon Gum Water
 2 gallons Acetate of Copper 16° Twaddle.
 Mix and strain.

No. 25.

ACETIC ACID for BROWN.

80 gallons Pyroligneous Acid 6° Twaddle
 10 lbs. Yellow Prussiate of Potash
 5 lbs. White Sugar of Lead.
 Boil 5 minutes, and let settle one night.
 Use clear liquor.

No. 26.

31 OLD BROWN.

MADDER.

6 gallons Gum Brown
 3 gallons Sal Ammoniac standard
 1 gallon Acetic Acid for Brown
 2¼ gallons Acetate of Copper 16° Twaddle
 2 gallons Gum Water.
 Mix, strain, and let settle one night. To be
 washed 3 times over in the tubs.

No. 27.

21 OLD BROWN.

MADDER.

- 6 gallons Gum Brown standard
- 2 gallons Sal Ammoniac standard
- 1 gallon Acetate of Copper 16° Twaddle
- 3 gallons Gum Water.

Mix and strain.

No. 28.

1 LIGHT Y. BROWN.

MADDER.

- 4 gallons Gum Brown
- 4 " Sal Ammoniac standard
- 1½ " Acetic Acid 6° Twaddle
- 6½ " Gum Water
- 2½ " Acetate of Copper 16° Twaddle.

Mix and strain.

No. 29.

2 LIGHT Y. BROWN.

- 2 gallons Sal Ammoniac standard
- $\frac{3}{4}$ gallon Acetic Acid 6° Twaddle for Brown
- $\frac{3}{4}$ " Gum Water
- $\frac{3}{4}$ " Acetate Copper 16° Twaddle.

Mix and strain.

No. 30.

3 LIGHT Y. BROWN.

MADDER.

- 4 gallons Sal Ammoniac standard
 - 1½ " Acetic Acid 6° Twaddle for Brown
 - 11 " Gum Water
 - 1¾ " Acetate Copper 16° Twaddle.
- Mix and strain.

No. 31.

4 LIGHT Y. BROWN.

MADDER.

- 2 gallons Sal Ammoniac Standard
 - 1 gallon Acetic Acid 6° Twaddle for Brown
 - 7 gallons of Gum Water
 - 1 gallon Acetate of Copper 16° Twaddle.
- Mix and strain.

No. 32.

6 LIGHT Y. BROWN.

MADDER.

- 2 gallons Sal Ammoniac standard
 - 1½ gallon Acetic Acid for Brown
 - 10½ gallons Gum Water
 - 1¼ gallon Acetate of Copper 16° Twaddle.
- Mix and strain.

No. 33.

31 R. BROWN PASTE.

MADDER.

12 gallons Sal Ammoniac standard

3 " Water

3 " Red Liquor 16° Twaddle

1 gallon Acetic Acid for Brown

31 lbs. Starch.

Boil and add

3 gallons Acetate of Copper 16° Twaddle.

Mix and strain.

No. 34.

9 BROWN PASTE.

MADDER.

8 gallons Sal Ammoniac standard

12 lbs. Starch.

Boil and add

2 gallons Acetate of Copper 16° Twaddle.

Mix well, and strain.

No. 35.

DARK BROWN PASTE.

MADDER.

8 gallons Sal Ammoniac standard

12 lbs. Starch.

Boil and add

1 gallon Acetate of Copper 16° Twaddle.

Mix well, and strain.

No. 36.

41 BROWN PASTE.

MADDER.

8 gallons C. standard

1 gallon Acetic Acid

1 " Water

1½ lb. Sal Ammoniac ground

14 lbs. new Flour.

Boil, and add

1 gallon Acetate of Copper 16° Twaddle.

Mix and strain.

No. 37.

2 A. BROWN.

MADDER.

- 4 gallons Gum Brown standard
 - 1 gallon Gum Water
 - $\frac{1}{2}$ " Acetate of Copper 16° Twaddle.
- Mix well, and strain.

No. 38.

32 BROWN PASTE.

MADDER.

- 6 gallons Sal Ammoniac standard
 - 1 gallon Acetic Acid for Brown
 - 1 " Water
 - 12 lbs. new Flour.
- Boil, and add
- 1 gallon Acetate of Copper 6° Twaddle.
- Mix and strain.

No. 39.

2 C. BROWN.

MADDER.

- 4 gallons X standard.
 - Thicken with
 - 6 lbs. of Gum substitute heated 180° F.
 - 4 gallons Gum Brown
 - 1 gallon Acetate of Copper 16° Twaddle.
- Mix and strain.

No. 40.

41 C. BROWN.

MADDER.

- 5 gallons Gum Brown standard
 - 2 " Sal Ammoniac standard
 - 1 gallon X standard
 - 2 gallons Acetate of Copper 16° Twaddle.
- Mix well and strain.

No. 41.

1 C. BROWN.

MADDER.

- 7 gallons Gum Brown standard
 - 1 gallon X standard 10° Twaddle
 - 1 " Acetate of Copper 16° Twaddle.
- Mix well and strain.

No. 42.

31 C. BROWN.

- 6 gallons Gum Brown
 - 3 " Sal Ammoniac
 - 1 gallon X standard 10° Twaddle
 - 3 gallons Gum Water
 - 1½ gallon Acetate of Copper 16° Twaddle.
- Strain.

No. 43.

X STANDARD.

8 lbs. Alum dissolved in 4 gallons hot Water.

Add

7½ lbs. Common Soda.

Dissolve in 2 gallons hot Water, and add your Soda to your Alum by degrees. Wash three times. Filter, and put in a pan. Add 1 quart of Muriatic Acid 36° Twaddle, and boil down to 2 gallons standard 10° Twaddle, and run through a calico cloth, and use the clear liquor.

No. 44.

G. ORANGE.

MADDER.

4 gallons Bark Liquor 16° Twaddle

6 lbs. Gum Starch

4 " Sal Ammoniac

1 quart X standard 10° Twaddle.

Boil, and half cool, and add

8 lbs. of Muriate of Tin Crystals.

Mix and strain.

No. 45.

2 ORANGE.

MADDER.

4 gallons Bark Liquor 16° Twaddle

4 lbs. Gum Starch.

Boil and add

2 quarts X standard 10° Twaddle

1 quart Oxide of Tin Salts

6 lbs. Muriate of Tin crystals.

Mix and strain.

No. 46.

DARK DRAB.

MADDER.

4 gallons Gum Brown

1 gallon Muriate of Iron 16° Twaddle

1½ " Acetate of Copper 16° Twaddle.

Mix and strain.

No. 47.

18 DARK DRAB.

MADDER.

1 gallon Dark Madder Drab

1 " 1 Madder Drab.

Mix and strain.

No. 48.

1 DRAB on 12 LBS. DRAB.

MADDER.

5 gallons C. Brown standard
1 gallon Nitrate of Iron 20° Twaddle
5 quarts Acetate of Copper 16° Twaddle
5 gallons Gum Water.
Mix and strain.

No. 49.

2 DRAB.

MADDER.

6 gallons C. Brown standard
1 gallon Nitrate of Iron 20° Twaddle
2 gallons Acetate of Copper 16° Twaddle
10 " Gum Water.
Mix and strain.

No. 50.

3 DRAB.

MADDER.

9 quarts Sal Ammoniac standard
1 quart Nitrate of Iron 20° Twaddle
4 quarts Acetate of Copper 16° Twaddle
30 " Gum Water.

No. 51.

4 MADDER DRAB.

3 measures Sal Ammoniac standard
 24 " Gum Water
 1 measure Sumach Liquor 10° Twaddle
 1 " 4 lbs. Lavender
 1 " Acetate of Copper 16° Twaddle.
 Mix and strain.

No. 52.

2 S. DRAB.

GARANCINE.

3 gallons Sal Ammoniac standard
 1 gallon Sumach Liquor 10° Twaddle
 12 gallons Substitute Water
 1 gallon 4 lbs. Lavender
 1 " Iron Liquor 24° Twaddle
 1½ " Acetate of Copper 16° Twaddle.
 Mix and strain.

No. 53.

2 R. DRAB.

GARANCINE.

9 quarts Sal Ammoniac standard
 2 " Muriate of Iron 20° Twaddle
 ½ quart Red Liquor 16° Twaddle
 2 quarts Acetate of Copper 16° Twaddle
 10 " Gum Water.
 Mix and strain.

No. 54.

5 R. DRAB.

GARANCINE.

- 4 gallons Sal Ammoniac standard
- 1 gallon Red Liquor 16° Twaddle
- 1 " Iron Liquor 24° "
- 7 gallons Gum Water.
- Mix, strain, and add
- 1 gallon Acetate of Copper 16° Twaddle.

No. 55.

5 MADDER DRAB.

GARANCINE.

- 3 quarts Sal Ammoniac standard
- 1 quart Iron Liquor 24° Twaddle
- 1 " Sumach 10° Twaddle
- 1 " 4 lbs. Lavender
- 3 quarts Acetate of Copper 16° Twaddle
- 30 " Gum Water.
- Mix and strain.

No. 56.

8 PURPLE PASTE.

MADDER.

7 gallons Water

1 gallon Fixing Liquor 42° Twaddle

1 " Iron Liquor 24° Twaddle

13 lbs. new Flour.

Boil and strain.

No. 57. 10 PURPLE PASTE; 9 galls. Water.

" 58.	12	"	"	11	"	"
" 59.	15	"	"	14	"	"
" 60.	18	"	"	17	"	"
" 61.	24	"	"	23	"	"
" 62.	30	"	"	29	"	"
" 63.	40	"	"	39	"	"
" 64.	50	"	"	49	"	"
" 65.	60	"	"	59	"	"
" 66.	70	"	"	69	"	"
" 67.	80	"	"	79	"	"
" 68.	100	"	"	99	"	"

Other ingredients in the foregoing same as in 8 PURPLE.

No. 69.

GUM PURPLE STANDARD.

7 gallons Water

1 gallon Fixing Liquor 42° Twaddle.

Mix well.

Should stand 6° Twaddle.

No. 70.

FARINA STANDARD.

44 gallons Water.

Dissolve 550 lbs. Farina, and measure off to

88 gallons. Add

12 gallons Fixing Liquor 42° Twaddle.

Put in a tub, strain well, and let stand all night.

No. 71.

24 GUM PURPLE.

MADDER.

1 gallon Iron Liquor 24° Twaddle

20 gallons Farina standard

4 " Fixing Liquor 6° Twaddle.

Mix well and strain.

No. 72. 15 GUM PURPLE; 11 gal. Farina stand.

"	73.	18	"	"	14	"	"	"
"	74.	20	"	"	16	"	"	"
"	75.	28	"	"	24	"	"	"
"	76.	30	"	"	26	"	"	"
"	77.	34	"	"	30	"	"	"
"	78.	36	"	"	32	"	"	"
"	79.	40	"	"	36	"	"	"
"	80.	50	"	"	46	"	"	"
"	81.	70	"	"	66	"	"	"
"	82.	80	"	"	76	"	"	"
"	83.	100	"	"	96	"	"	"

Other ingredients the same as 24 GUM PURPLE. These are all the GUM PURPLE shades.

No. 84.

X RESIST RED.

MADDER.

12 gallons best Red Liquor 16° Twaddle

34 lbs. Flour.

Boil and add

12 lbs. Muriate of Tin Crystals.

Mix well and strain.

1 pint Bark Liquor 8° Twaddle.

No. 85.

P. RED.

MADDER.

6 gallons Red Liquor 16° Twaddle

12 lbs. Starch Flour.

Boil and add

1 pint Muriate of Tin 120° Twaddle.

Mix well and strain.

Seat in with Japan Liquor at 8° Twaddle.

No. 86.

S. RED.

MADDER.

5 gallons Red Liquor 16° Twaddle same as before; boil and add

1 gill Muriate of Tin 120° Twaddle.

Mix and strain.

Seat in with Japan Liquor 8° Twaddle.

No. 87.

DARK RESIST RED.

MADDER.

4 gallons Red Liquor 16° Twaddle

8 lbs. Flour.

Boil and add

1½ lb. Muriate of Tin Crystals.

Mix and strain.

Seat in with 1 pint Japan Liquor 8° Twaddle.

COLOR MIXER.

37

No. 88.

10 RED.

MADDER.

6 gallons Red Liquor 16° Twaddle

2 " Water

16 lbs. Flour and Starch mixed.

Boil and add

1 gill Muriate of Tin 120° Twaddle.

Seat it with Japan Liquor 8° Twaddle.

Mix and strain.

No. 89.

6 LIGHT RED.

MADDER.

6 gallons Water

1 gallon Red Liquor 16° Twaddle

10 lbs. Flour.

Boil and add

7 lbs. Muriate of Tin Crystals.

Mix and strain.

Seat in with 1 gill Japan Liquor 8° Twaddle.

No. 90.

9 LIGHT RED.

1 gallon best Red Liquor 16° Twaddle
9 gallons Water
18 lbs. Flour.
Boil and add
20 oz. Muriate of Tin Crystals.
Mix and strain.
Seat in with 1 pint Bark Liquor 8° Twaddle.

No. 91.

12 LIGHT RED.

MADDER.

1 gallon Red Liquor 16° Twaddle
12 gallons Water
26 lbs. Flour.
Boil and add
13 oz. Muriate of Tin Crystals.
Mix and strain.
Seat in with 3 gills Bark Liquor 8° Twaddle.

No. 92.

LIGHT RESIST RED.

MADDER.

8 gallons Water
 2 " Red Liquor 16° Twaddle
 20 lbs. Flour.
 Boil and add
 3 lbs. 12 oz. Muriate of Tin Crystals.
 Mix and strain.
 Seat in with Japan Liquor 8° Twaddle.

No. 93.

11 RESIST RED.

MADDER.

12 gallons Red Liquor 16° Twaddle
 24 lbs. Flour.
 Boil and add
 10 oz. Muriate of Tin Crystals.
 Mix and strain.
 Per gallon seat in with 1 quart Japan Liquor
 8° Twaddle.

No. 94.

DARK RED PASTE.

MADDER.

12 gallons Red Liquor 16° Twaddle

24 lbs. Flour.

Boil and strain.

Seat in with 2 qts. Japan Liquor 8° Twaddle.

No. 95.

1 B. RED.

1 gallon Water

1 " Red Liquor 16° Twaddle

3 lbs. White British Gum.

Boil and add

1 oz. Muriate of Tin Crystals.

Mix and strain.

Seat in with Japan Liquor 8° Twaddle.

No. 96. 2 B. RED. No. 101. 7 B. RED.

" 97. 3 B. RED. " 102. 8 B. RED.

" 98. 4 B. RED. " 103. 10 B. RED.

" 99. 5 B. RED. " 104. 12 B. RED.

" 100. 6 B. RED. " 105. 16 B. RED.

Reduce these according to shade desired.

No. 106.

MORDANT for BLACKS.

32 gallons Water
 73 lbs. Acetate of Lime. Dissolve
 27 lbs. Copperas
 64 " Alum.

Let settle and filter off. Should stand 18°
 Twaddle.

No. 107.

PADDING LIQUOR.

18 gallons Mordant for Black
 18 " Red Liquor 16° Twaddle
 4 " Pyroligneous Acid 6° Twaddle
 40 " Water.

Stir up well. It should stand 8° Twaddle.

No. 108.

ACID STANDARD for BLACK.

4 gallons Water. Dissolve
 12 lbs. Sulphate of Potash. Add
 8 gallons Lemon Juice 60° Twaddle
 Mix and filter; use clear liquor.

No. 109.

STRONG V. ACID.

MADDER.

4 gallons above Standard

6 lbs. Starch.

Boil and strain.

No. 110.

6 V. ACID.

MADDER.

4 gallons above Standard

6 lbs. Starch.

Boil and add

 $1\frac{1}{2}$ lb. Oxalic Acid.

Dissolve and strain.

No. 111.

2 LAVENDER for RED PADDING.

20 lbs. Sulphate of Potash.

Dissolve in 2 gallons Water, and add

14 gallons Substitute Water. And add

1 quart Oxymuriate of Tin 120° Twaddle.

Mix well, and strain.

No. 112.

OIL for COLORS.

90 lbs. Palm Oil
 10 gallons Gallipoli Oil
 10 lbs. good Tallow
 5 quarts Spirits of Turpentine.
 Dissolve and strain.

No. 113.

IRON MORDANT, OLD.

24 gallons Iron Liquor 24° Twaddle
 12 " Vinegar 4° Twaddle
 4 lbs. Red Prussiate
 4 " Nitrate of Potash
 4 " Nitrate of lead.
 Boil one hour, and let settle one night.

No. 114.

18 SHADE.

MADDER.

1 gallon Muriate of Iron 64° Twaddle
 3 gallons Substitute Water.
 Mix and strain.

No. 115.

NEW BLACK.

MADDER LOGWOOD.

2 gallons Water
1 gallon Red Liquor 16° Twaddle
1 " Iron Liquor 24° "
6 lbs. Starch.
Boil and strain.

No. 116.

24 GUM PURPLE.

2 gallons Farina Standard
4 " Fixing Liquor 6° Twaddle
1 gallon Seated Iron 22° Twaddle.
Strain.

No. 117.

16 RESIST RED.

MADDER.

2 gallons Red Liquor 16° Twaddle
6 lbs. Flour.
Boil and put in
2 lbs. Muriate of Tin Crystals.
Strain.

No. 118.

DARK RESIST RED.

4 gallons Red Liquor 16° Twaddle

8 lbs. Flour.

Boil and add

1½ lb. Muriate of Tin Crystals.

Strain and add

1 pint Japan Liquor at 8° Twaddle.

No. 119.

P. RED.

MADDER.

6 gallons Red Liquor 16° Twaddle

15 lbs. Flour. Boil and add

1 pint Muriate of Tin 120° Twaddle.

Mix and strain.

No. 120.

10 RED.

MADDER.

2 gallons Water

6 " Red Liquor 16° Twaddle

18 lbs. Flour.

Boil and add

1 gill Muriate of Tin 120° Twaddle.

No. 121.

9 RED.

MADDER.

2 gallons Water
6 " Red Liquor 16° Twaddle
18 lbs. Flour.
Boil and strain.

No. 122.

O. PASTE for ORANGE.

1 gallon Juice Liquor 52° Twaddle
3 lbs. Substitute Water.
Boil and add
2 lbs. Sulphate of Zinc.
Dissolve and add
1 quart Substitute Water
8 oz. Chlorate of Potash.
Mix and strain.

No. 123.

8 PURPLE PASTE.

MADDER.

1 gallon Iron Mordant 22° Twaddle
 8 gallons Fixing Purple Liquor 6° Twaddle
 15 lbs. Gum Starch.
 Seat in with 1 pint Logwood Liquor 10°
 Twaddle.
 Boil and strain.

No. 124.

FINISHING BLUE.

18 gallons Water. Dissolve
 21 lbs. Yellow Prussiate
 4 gallons Iron Liquor 24° Twaddle
 $\frac{3}{4}$ gallon Oxymuriate of Tin 120° Twaddle
 5 quarts Water
 6 lbs. best Chrome.
 Dissolve in 5 gallons Hot Water
 $1\frac{1}{2}$ lb. Oxalic acid.
 Dissolve in 1 gallon Hot Water.
 Add 18 gallons Water.
 Ready for use.

No. 125.

2 LAVENDER for REDS.

2 quarts Hot Water
2½ lbs. Supersulphate of Potash
6 quarts of Gum Substitute. *
Thicken and add
1 noggin Oxymuriate of Tin
1 " Muriate of Tin 120° Twaddle.
Mix and strain

No. 126.

DARK PINK.

4 gallons Standard
1 gallon Subte. Water.
Mix and strain.

No. 127.

1 PINK.

1 gallon Standard
1 " Gum Subte. Water.
Mix and strain.

No. 128.

2 PINK.

2 gallons Standard

4 " Gum Subte. Water.

Mix and strain.

Reduce the other Pinks according to number, as you want them.

No. 129.

9 PALE RED.

1 gallon best Red Liquor 16° Twaddle

18 lbs. Flour

9 gallons Water

10 oz. of Muriate of Tin Crystals.

Mix and strain.

1 pint Bark Liquor 8° Twaddle.

No. 130.

12 LIGHT RED.

1 gallon best Red Liquor 16° Twaddle

12 gallons Water, boiled

26 lbs. Flour

13 oz. Muriate of Tin Crystals.

Mix and strain.

3 gills Bark Liquor 8° Twaddle.

No. 131.

LOGWOOD STANDARD.

- 24 gallons Logwood 8° Twaddle
- 8 " Hot Water
- 1 lb. Chloride of Potash dissolved
- 1 lb. Sal Ammoniac dissolved.
- Let settle.

No. 132.

ACETIC ACID for BROWN.

- 80 gallons Pyroligneous Acid
- 10 lbs. Prussiate of Potash, yellow
- 5 lbs. White Sugar of Lead.
- Boil 5 minutes, and let settle.

No. 133.

IRON MORDANT NEW.

- 24 gallons Iron Liquor 24° Twaddle
- 12 " Pyroligneous Acid 6° Twaddle
- 4 lbs. White Sugar of Lead
- 4 " Red Prussiate of Potash
- 4 " Nitrate of Potash
- 1 lb. Saltpetre.
- Boil one hour, and let settle over night.

No. 134.

LIGHT RESIST RED.

8 gallons Water
 2 " Red Liquor 16° Twaddle
 20 lbs. Flour boiled
 3 lbs. 12 oz. Muriate of Tin Crystals.
 Mix and strain.

No. 135.

MORDANT for BLACKS.

76 lbs. Acetate of Lime. Dissolve
 28 " Copperas
 66 " Alum
 32 gallons Water.
 Filter the clear liquor off.

No. 136.

BLACK PADDING LIQUOR.

18 gallons Red Liquor 16° Twaddle
 18 " Mordant above
 4 " Pyroligneous Acid 6° Twaddle
 40 " Water.
 Stir up well.

No. 137.

IMPRESSION BLUE.

* 3 gallons Finishing Blue

3 lbs. Crystal. Starch.

Boil and strain.

No. 138.

5 V. BLACK.

3 gallons Common Iron 24° Twaddle

6 " Water

18 lbs. Flour.

Boil and strain.

No. 139.

2 A. BROWN.

4 quarts Acetate of Copper 16° Twaddle

4 gallons Gum Brown Standard

1 gallon Gum Water.

Mix and strain.

No. 140.

41 PASTE BROWN.

- 8 gallons Sal Ammoniac Standard
- 1 gallon Acetic Acid 6° Twaddle
- 1 " Water
- 14 lbs. New Flour
- 1½ lb. Sal Ammoniac.
- Boil and add
- 1 gallon Acetate of Copper 16° Twaddle.
- Mix and strain.

No. 141.

1 C. BROWN.

- 7 gallons Gum Brown Standard
- 1 gallon X Standard
- 1 " Acetate of Copper 16° Twaddle.
- Mix well, and strain.

No. 142.

32 P. BROWN.

- 6 gallons Sal Ammoniac Standard
- 1 gallon Wood Acid 8° Twaddle
- 1 " Water
- 12 lbs. New Flour. Boil and add
- 1 gallon Acetate of Copper 16° Twaddle.
- Mix and strain.

No. 143.

FINISHING BLUE.

18 gallons Water

21 lbs. Yellow Prussiate.

Dissolve in 14 gallons Hot Water

28 lbs. Copperas. Dissolve. Mix

2 gallons Water. Add

$\frac{1}{2}$ gallon Oxymuriate of Tin 120° Twaddle

6 gallons Hot Water. Dissolve

6 lbs. best Chrome. Mix

$1\frac{1}{2}$ lb. Oxalic Acid. Dissolve in

2 gallons Hot Water, and

16 " Cold Water.

Stir well.

No. 144.

W. BLACK WOOLLEN.

3 gallons Logwood 8° Twaddle

4 lbs. Starch, boiled

3 oz. Yellow Prussiate, cooled

4 gills Nitrate of Iron 80° Twaddle

2 " Muriate of Iron 60° Twaddle

2 " Nitrate of Copper.

Mix well, and strain.

No. 145.

P. BLACKS.

- 1 gallon Iron Liquor 24° Twaddle
 - 2 gallons Pyroligneous Acid 6° Twaddle
 - 3 " Water.
- Strain.

No. 146.

TWICE D. Y. BROWN.

- 6 gallons Gum Brown Standard
 - 1 gallon Acetate of Copper 16° Twaddle.
- Mix and strain.

No. 147.

4 X BLACK.

- 3 gallons Water
 - 1 gallon Wood Acid
 - 1 " Iron Liquor 24° Twaddle
 - 10 lbs. Flour.
- Boil and strain.

No. 148.

PURPLE MORDANT.

- 5 gallons Water
5 " Wood Acid 6° Twaddle P. A.
2 " Iron Liquor 24° "
3 $\frac{3}{4}$ lbs. Copperas
1 $\frac{1}{2}$ lb. Saltpetre
2 $\frac{1}{4}$ lbs. White Arsenic.
Boil 15 minutes, and let stand one night.

No. 149.

15 S. PURPLE ELIZERINE.

- 14 gallons Substitute Water
1 gallon Fixing Liquor 42° Twaddle
1 " X Purple Mordant.
Stir well and strain.

No. 150.

* 2 R. DRAB TWICE.

MADDER.

- 9 quarts Sal Ammoniac Standard
2 " Muriate of Iron 20° Twaddle
2 " Copper Acetate 16° "
 $\frac{1}{2}$ quart Red Liquor 16° Twaddle
10 quarts Gum Water.
Mix and strain.

No. 151.

* 5 R. DRAB TWICE.

MADDER.

4 gallons Sal Ammoniac Standard
 1 gallon Red Liquor 16° Twaddle
 1 " Iron Liquor 24° "
 1 " Acetate of Copper 16° Twaddle
 7 gallons Gum Water Substitute.
 Mix and strain.

No. 152.

* 11 RESIST RED TWICE.

24 lbs. Flour
 12 gallons Red Liquor 16° Twaddle
 ¼ gallon Japan Liquor 8° "
 Boil well and add
 10 lbs. Muriate of Tin Crystals.
 Mix and strain.

No. 153.

* 4 M. DRAB TWICE.

- 3 measures Sal Ammoniac standard
 - 24 " Gum Water
 - 1 measure Sumach Liquor 10° Twaddle
 - 1 " Lavender standard
 - 1 " Iron Liquor 24° Twaddle
 - 2 measures Acetate of Copper 16° Twaddle.
- Mix and strain.

No. 154.

X OXIDE OF CHROME STANDARD.

- 10 quarts Water. Dissolve in it
 - 10 lbs. best Chrome. Then take
 - 7½ " Sulphuric Acid 170° Twaddle.
- Add 2 quarts of Cold Water. Mix. Add
by degrees to the above. Then add
- 2½ lbs. Common Sugar by degrees.
- Let it stand until cool, and add
- 1 pint Muriate of Tin 120° Twaddle.
- Mix, and measure all together.
- There should be 3 gallons ready.

No. 155.

* 1 X SHADE.

4 quarts of the above Liquor

3 " Substitute Water.

Mix and strain.

No. 156.

OXIDE OF CHROME STANDARD.

8 lbs. best Chrome

2 gallons Water. Dissolve and add

1 quart Sulphuric Acid 166° Twaddle. Add

2 quarts Water. And add by degrees

2 lbs. Brown Sugar

Set, put in a pan, and boil down to 2 gallons.

No. 157.

2 SHADE.

2 gallons of the above

1 gallon Gall Liquor 18° Twaddle

1 " Iron Liquor 24° Twaddle

4 gallons Substitute Water.

Mix and strain.

No. 158.

* 3 BLACK.

MADDER.

1 gallon Water

1 " P. A. Liquor 6° Twaddle

1 " Iron Liquor 24° "

12 lbs. Flour.

Boil and strain.

No. 159.

* NEW CHOCOLATE.

2 gallons Red Liquor 6° Twaddle

1 gallon Iron Liquor 8° "

16 lbs. Flour.

Boil, mix, and strain.

No. 160.

PENCIL BLUE STANDARD.

1½ gallon Water

1½ " 4 lb. Indigo

1 " Caustic Soda 70° Twaddle

4¾ lbs. Red Arsenic.

Boil 1 hour and add

1 lb. Dust Lime, and let stand all night, and
strain, and add

8 lbs. Ground Gum Arabic, and strain again.

No. 161.

P. SLATE.

MADDER.

3 gallons of the above

3 " Gum Dragon Water 4 oz. per gallon

$\frac{3}{4}$ gallon Red Liquor 16° Twaddle.

Mix and strain.

No. 162.

* 21 SLATE.

GARANCINE.

1 gallon fast Blue Standard

2 gallons Substitute Water

1 gallon Water

$\frac{3}{4}$ noggin Iron Liquor 24° Twaddle.

No. 163.

* OIL for COLORS TWICE.

1 gallon Galipoli Oil

1 " Palm Oil

1 lb. Flour. Dissolve; when half cooled add

1 quart Turpentine.

Mix well.

No. 164.

* 8 FAWN.

MADDER.

- 6 measures Sal Ammoniac Standard
 - 2 " Oxide of Chrome
 - 1 measure Iron Liquor 24° Twaddle
 - 2 measures Acetate of Copper 16° Twaddle
 - 12 " Substitute Water.
- Mix and strain.

No. 165.

* 2 C. BROWN.

MADDER.

- 4 gallons X standard. Thicken with
 - 6 lbs. 3 oz. Gum Substitute.
 - Heat to 180° and add
 - 4 gallons Gum Brown
 - 1 gallon Acetate of Copper 16° Twaddle.
- Mix and strain.

No. 166.

* 8 NEW CHOCOLATE.

MADDER.

6½ gallons Water
 1½ gallon Fixing Liquor 42° Twaddle
 8 gallons Red Liquor 16° Twaddle
 2 " Iron Liquor 24° "
 32 lbs. new Flour.
 Boil and strain.

No. 167.

* 15 NEW CHOCOLATE.

MADDER.

6 gallons Water
 1½ gallon Fixing Liquor 42° Twaddle
 7½ gallons Red Liquor 16° Twaddle
 1 gallon Iron Liquor 24° Twaddle
 30 lbs. new Flour.
 Boil and strain.

No. 168.

BERRY LIQUOR AT 18° TWADDLE.

100 lbs. Berries with
 18 gallons Bark Liquor 8° Twaddle.
 It produces
 22 gallons of Liquor 18° Twaddle.

No. 169.

6 FAWN.

GARANCINE.

3 gallons Oxide Chrome Standard
2 " Sal Ammoniac Standard
8 " Substitute Water
1 gallon Iron Liquor 24° Twaddle
1 " Acetate of Copper 16° Twaddle.
Mix.

No. 170.

P. ALUMINATE OF SODA.

Take a large tub that will hold 200 gallons, and put in it 20 gallons Cold Water, 40 lbs. Alum dissolved in 20 gallons Hot Water; add to the above; and then take a pan, and put in it 3 gallons Caustic Soda 70° Twaddle, and add 6 gallons Water, and add to the above, and stir well, and wash three times with Cold Water, and filter to a pulp. Put in a pan, and add $2\frac{3}{4}$ gallons Caustic Soda 70° Twaddle. Stir well, and boil down to 12 gallons of Liquor, and filter through calico, and thicken with 20 lbs. 3 Gum Substitute heated 180°; heat and strain.

No. 171.

X STANDARD.

Put in a tub 20 gallons Cold Water; and add 40 lbs. Alum. Dissolve in 20 gallons Hot Water, and 38 lbs. Common Soda. Dissolve in 20 gallons Hot Water, stir well, and wash three times over. Filter, and put in a pan, and add $2\frac{1}{2}$ gallons Muriatic Acid 36° Twaddle, and boil down to 10 gallons of liquor. Should stand 10° Twaddle, and run through Calico.

No. 172.

SUBSTITUTE FOR A. RED

is 4 lbs. Brown British Gum per gallon.

Take 28 gallons of Boiling Hot Water, and beat up 112 lbs. of the above gum, and strain.

No. 173.

2 A. RED

is 2 Substitute, and 1 of Red Liquor 16° Twaddle.

No. 174.

3 A. RED

is 3 Substitute, and 1 of Red Liquor 16° Twad-
dle.

No. 175.

4 A. RED

is 4 Substitute, and 1 of Red Liquor 16° Twad-
dle.

No. 176.

5 A. RED.

10 A. RED.

6 A. RED. .

12 A. RED.

7 A. RED.

16 A. RED.

8 A. RED.

2 A. REDS.

9 A. RED.

These are all the shades, and use 1 gill of
Acetic Acid for every gallon of color.

No. 177.

15 FAWN.

GARANCINE.

- 2 gallons Gall Liquor 18° Twaddle
 - 2 " Sal Ammoniac Standard
 - 13 gallons Substitute Water
 - 1 gallon Iron Liquor 24° Twaddle
 - 1 " Acetate of Copper 16° Twaddle.
- Mix and strain.

No. 178.

4 X SHADE.

- 1 gallon Oxide of Chrome Standard
 - 4 gallons Subte. Water.
- Mix and strain.

No. 179.

3 X SHADE.

- 1 gallon Oxide of Chrome Standard
 - 3 gallons Substitute Water.
- Mix and strain.

No. 180.

17 STONE.

GARANCINE.

- 6 gallons Sal Ammoniac Standard
20 " Substitute Water
1 gallon Muriate of Iron 20° Twaddle
2 gallons Acetate of Copper 16° Twaddle.
Mix and strain.

No. 181.

ULTRAMARINE BLUE.

STEAM.

- 24 lbs. Blue
24 " Albumen Water.
Mix dry.

No. 182.

- 2½ gallons Water at 140° F.
4 quarts Glue at 4 lbs. to a gallon
1 quart Turpentine.
4 quarts Acetate of Soda.
Mix and stir 1 hour.
1 pint Spirits of Wine.
Stand all night.
1 gill Oil.
Mix and strain.

No. 183.

1 gallon Water

4 lbs. Acetate of Soda

4 oz. White Arsenic.

Dissolve and add

1 gallon Hot Water

2 lbs. Alum.

Dissolve. Mix by degrees to the above.

No. 184.

FAST GREEN.

STEAM.

8 quarts Blue Standard

3 " Acetate of Tin

2 $\frac{1}{4}$ " Nitrate of Lead.

Mix and strain.

No. 185.

X STANDARD FOR NITRATE OF
LEAD.

In 1 quart Water dissolve

2 $\frac{1}{2}$ lbs. Nitrate of Lead, and add

1 quart Gum Water.

Mix.

No. 186.

NITRATE OF IRON PULP.

3 gallons Nitric Acid 64° Twaddle

1 gallon Hot Water.

Dissolve in your Iron till it will take no more.

No. 187.

WOLLIN WALKER BLACK.

3 gallons Logwood Liquor 8° Twaddle.

3 lbs. Gum Starch

12 oz. Blue Stone (Sulphate of Copper)

12 oz. Copperas (Sulphate of Iron).

Boil, and let it be half cooled, and add

2 quarts Nitrate of Iron Pulp.

No. 188.

4 B. DRAB STEAM X.

12 lbs. Albumen

1 lb. Lampblack. Mix dry.

3 gallons Water.

Beat up, stir 1 hour, stand 1 night; strain.

No. 189.

X DARK C. BUFF STANDARD.

10 quarts Bark Liquor 12° Twaddle.
 4 " Sapan Extract
 1 lb. Alum
 4 oz. Chloride of Potash.
 Dissolve.

No. 190.

X 1 STEAM BROWN.

4 quarts of above Standard
 10 lbs. 3 Gum Substitute
 1 oz. Chloride of Potash.
 Heat 180° F., and add
 1 quart Red Liquor 16° Twaddle
 1¼ " D. Purple Standard.

No. 191.

X. ORANGE.

6 gallons Bark Liquor 12° Twaddle
 2 " Sapan Extract.
 12 lbs. Gum Starch.
 1½ " Alum. Boil and add
 1½ " Tin Crystals.
 1 quart Red Liquor 16° Twaddle.
 Mix and strain.

No. 192.

LIGHT BROWN.

STEAM.

- 5 quarts Bark Liquor 12° Twaddle
 - 5 " Berry Liquor 12° Twaddle
 - 12 oz. Cream of Tartar
 - 1 oz. Chloride of Potash
 - 7 lbs. 3 Gum Substitute
 - 2 oz. Red Prussiate of Potash. Dissolve
 - 2 quarts Sapan Extract
 - 1½ pint D. Purple Standard
 - 1½ " Sapan Liquor at 8° Twaddle.
- Mix and strain.

No. 193.

X DARK PURPLE STANDARD.

- 1 gallon Hot Water
 - 10 oz. Alum
 - 10 " Red Prussiate of Potash.
- Dissolve; put in
- 1 gallon Logwood Liquor 8° Twaddle
 - 1 quart Sapan Liquor 8° Twaddle.

No. 194.

DARK BROWN.

STEAM.

4 gallons Bark Liquor 20° Twaddle
 3 lbs. Alum
 7 " Gum Starch. Boil and add
 4 oz. Chloride of Potash
 4 " Red Prussiate
 1 gallon Sapan Extract
 3 quarts D. Purple Standard.
 Strain.

No. 195.

X 1 P. DRAB.

STEAM.

2 gallons C. Buff Standard
 1 gallon at 4 lbs. Lavender
 1 gallon Gall Liquor 18° Twaddle
 1 noggin Iron Liquor 24° "
 4 gallons Substitute Water.
 Mix and steam.

No. 196.

X PAD BLUE.

STEAM.

- 4 gallons Cold Water
- 10 lbs. Starch
- 3 lbs. Sal Ammoniac. Boil and add
- 15 " Tartaric Acid
- 4 gallons Tin Pulp
- 1 lb. Oxalic Acid. Dissolve in
- 1 quart Water
- 13 lbs. Yellow Prussiate of Potash
- 3 lbs. Red Prussiate of Potash.
- Mix and strain.

No. 197.

X STEAM.

BLACK.

- 8 gallons Logwood 8° Twaddle
- 1 gallon Acetic Acid 8° Twaddle
- 2 gallons Iron Liquor 24° Twaddle
- 15 lbs. Starch.
- Boil and strain.

No. 198.

X A. CHOCOLATE.

STEAM.

7½ gallons Sapan Extract
 5½ " Logwood Standard
 2 " Lavender at 4 lb. per gallon.
 1 gallon Bark Liquor 8° Twaddle
 24 lbs. Gum Starch
 3 " Alum
 1 lb. Yellow Prussiate.
 Boil and strain.

No. 199.

SPIRIT BLACK.

STEAM.

8 quarts Logwood 8° Twaddle
 4 " Iron Liquor 24° Twaddle
 2 " Vinegar 4° Twaddle
 2 " Red Liquor 16° Twaddle
 16 lbs. Gum Starch.
 Boil and strain.

No. 200.

X DARK BLUE.

STEAM.

6 gallons Water
20 lbs. Starch. Boil and add
3½ " Sal Ammoniac
20 " Tartaric Acid
1 lb. Oxalic Acid. Dissolve in
1 quart Water.
5 gallons Pulp Tin
20 lbs. Yellow Prussiate of Potash
2 " Red Prussiate of Potash.
Mix and strain.

No. 201.

X DARK C. DRAB.

STEAM.

9 gallons Gall Liquor 18° Twaddle
3 " Lavender at 4 lbs.
1 gallon common Iron Liquor 24° Twaddle
30 lbs. 3 Gum Substitute.
Heat to 180° F. Strain.

No. 202.

X GALL STANDARD.

CALICO.

9 quarts Gall Liquor 18° Twaddle
 1 quart Logwood 8° Twaddle
 1 " Nitrate of Iron 80° Twaddle.
 Mix and let settle.

No. 203.

X DARK PASTE.

OLIVE.

6 quarts Berry Liquor 8° Twaddle
 2 " Red Liquor 16° Twaddle
 2 " Gall Standard
 2½ lbs. Starch.
 Boil and strain.

No. 204.

X 6 PASTE.

OLIVE.

6 quarts Berry Liquor 8° Twaddle
 2 " Red Liquor 16° Twaddle
 2 " Gall Standard
 4 " Water
 3½ lbs. Crystal Starch
 Boil and strain.

No. 205.

X 6 DARK GREEN.

9 gallons Bark 12° Twaddle
13 lbs. Gum Starch
5 " Alum. Boil and add
1 pint Muriate of Tin 120° Twaddle
6 lbs. Tartaric Acid
1 lb. Oxalic Acid. Dissolve
15 lbs. Yellow Prussiate.
Mix and strain.

No. 206.

X PEA-GREEN or 16 GREEN.

STEAM.

13 gallons Berry Liquor 18° Twaddle
16 lbs. Ground Alum
1 gallon Acetic Acid 8° Twaddle
 $\frac{1}{2}$ gallon Muriate of Tin 120° Twaddle.
Dissolve 32 lbs. Yellow Prussiate of Potash in
13 gallons Gum Substitute Water.
Mix and strain.

No. 207.

X LIGHT GREEN.

STEAM.

5 gallons Berry Liquor 18° Twaddle
1 gallon Hot Water
8 lbs. Ground Alum
1 quart Muriate of Tin 120° Twaddle
3 quarts Vinegar.

Mix and add

11 lbs. Yellow Prussiate of Potash
10½ gallons Gum Water.

Mix and strain.

No. 208.

X 16 DARK C. BLUE.

1 gallon Water
5 lbs. Starch.
1 gallon Iron Liquor 24° Twaddle
2 gallons China Blue Standard.

Mix, boil well, and strain.

No. 209.

X 16 GUM BLUE.

CHINA RIGHT.

- 4 gallons Standard Blue
 - 2 " Gum Water
 - 2 " common Iron Liquor 24° Twaddle.
- Mix well and strain.

No. 210.

X 4 GUM C BLUE.

- 2 gallons 8 Blue China
 - 1 gallon Gum Water
 - 1 " Iron Liquor 24° Twaddle.
- Mix well and strain.

No. 211.

PRUSSIATE TIN PULP.

Take a large tub, and put in—

- 10 gallons Hot Water, in which you dissolve
- 16 lbs. Yellow Prussiate Potash.

Take—

- 8 gallons Cold Water, to which you add
- 2 " Muriate of Tin 120° Twaddle.

Add the Tin to the Prussiate; mix well;
wash three times over; filter.

No. 212.

X DARK FAST GREEN.

6 quarts Blue Standard
 2 " Acetate of Tin
 2 " Nitrate of Lead.
 Mix and strain.

No. 213.

DARK FAST BLUE.

4 gallons Standard Blue
 1 gallon Acetate of Tin.
 Mix and strain.

No. 214.

No. 1. FAST BLUE.

2 gallons Standard Blue
 1 gallon Acetate of Tin
 1 gallon Gum Water.
 Mix and strain.

No. 215.

No. 2. FAST BLUE

1 gallon Blue Standard
2½ quarts Acetate of Tin
5 " Gum Water.
Mix and strain.

No. 216.

No. 3. FAST BLUE.

2 gallons Blue Standard
1½ gallon Acetate of Tin
4½ gallons Gum Water.
Mix and strain.

No. 217.

No. 4. FAST BLUE.

2 gallons Blue Standard
1¾ gallon Acetate of Tin
6¼ gallons Gum Water.
Mix and strain.

No. 218.

No. 6. FAST BLUE.

1 gallon Blue Standard
 1 " Acetate of Tin
 5 gallons Gum Water.
 Mix and strain.

No. 219.

12 C. BLUE.

2 gallons Blue Standard
 1½ gallon common Iron Liquor 24° Twaddle
 1½ " Water
 6 lbs. Starch.
 Boil well and strain.

No. 220.

8 GUM BLUE.

CHINA.

2 gallons Blue Standard
 3 " Gum Water
 3 " common Iron Liquor 24° Twaddle.
 Mix well and strain.

No. 221.

SCARLET RED.

WOOLLEN NOT SO GOOD.

- 3 quarts Sapan Liquor 12° Twaddle
 - 1 quart Bark Liquor 12° Twaddle
 - 1 lb. of Gum Starch, boil; half cool,
add
 - 1 gill Nitrate of Iron 80° Twaddle
 - 1 " Oxymuriate of Tin
 - 4 lbs. Pink Salts.
- Strain.

No. 222.

GREEN FOR WOOLLEN.

- 1 gallon Bark Liquor 22° Twaddle
 - 1 lb. Gum Starch
 - 3 lbs. Alum, boil; half cool, add
 - 2 " Muriate of Tin Crystals
 - 2 " Yellow Prussiate. Mix
 - 1 pint Extract of Indigo.
- Strain.

No. 223.

ACETATE OF TIN.

6 quarts Water
32 lbs. White Sugar of Lead.

Dissolve in the Boiling Water; then take a half piece mug; put in 2 gallons Muriate of Tin 120° Twaddle; mix both well together; then put in 1 gallon of Water more; mix all up together. When filtered, should be 4 gallons. Should stand 30° Twaddle. Dissolve in that 10 lbs. Gum Senegal ground. Strain.

No. 224.

STEAM ORANGE FOR WOOLLEN.

1 quart Sapan Liquor 8° Twaddle.
3 pints Bark Liquor 22° Twaddle
3 " Bark Liquor 12° Twaddle
20 oz. Starch. Boil, half cool, and add
3 gills Oxymuriate of Tin 120° Twaddle.
Mix and strain.

No. 225.

STANDARD CHINA BLUE.

27 gallons Iron Liquor 24° Twaddle

54 lbs. Copperas. Dissolve

90 lbs. Indigo, and grind in the mill 14 days.

Wash the mill out with 4 gallons Water, and then measure all together 45 gallons of Pulp.

No. 226.

RED FOR WOOLLEN.

2½ quarts Sapan Liquor 8° Twaddle

1 quart Extract

1 pint Bark Liquor 22° Twaddle

1 lb. Gum Starch, boil, let half cool

1 gill Nitrate of Iron 80° Twaddle

1 pint Oxymuriate of Tin 120° Twaddle

1 noggin Muriate of Tin 120° Twaddle.

Strain.

No. 227.

STANDARD FOR PAD NEW BLUE.

6 gallons Hot Water

12 lbs. Tartaric Acid. Dissolve

12 " Yellow Prussiate.

Let settle; take clear liquor for use.

No. 228.

D. 4 P. BLUE FOR BLACK SHADE
WOOLLEN.

STEAM.

4 gallons of the above Steam
12 lbs. Crystal Starch. Boil and add
4 gallons Tin Pulp
6 lbs. Tartaric Acid
4 " Sal Ammoniac
1 quart Water
1 lb. Oxalic Acid. Dissolve
10 lbs. Yellow Prussiate.
Stir well; strain on Calico cloth.

No. 229.

DARK BUFF PASTE 6 & 3 STANDARD.

STEAM.

3 gallons Buff Liquor
6 lbs. Gum Starch.
Boil and strain.

No. 230.

1 BUFF PASTE.

STEAM.

2 gallons Buff Liquor 6 and 3 Standard
2 gallons Water
8 lbs. Flour.
Boil and strain.

No. 231.

2 BUFF PASTE.

2 gallons Buff 6 and 3 Standard

4 " Water.

Thicken with 12 lbs. Flour.

Boil and strain.

No. 232.

* 6 and 3 BUFF STANDARD.

20 gallons Hot Water

240 lbs. Sulphuret of Iron. Dissolve

120 lbs. Brown Sugar of Lead.

Dissolve in 20 gallons of water.

Mix together, and let settle.

No. 233.

* 1 FAST BUFF.

1 gallon of the above Liquor

1 " Substitute Water.

Mix well and strain.

No. 234.

* 2 FAST BUFF.

2 gallons Buff Standard

4 " Substitute Water.

Mix well and strain.

* Reduce the others according to number.

No. 235.

* 4 LB. INDIGO.

IN THE MILL.

16 gallons Water.

80 lbs. Indigo, ground well.

Measure to 20 gallons pulp when out of the mill.

No. 236.

4 B. DRAB.

STEAM.

3 gallons Warm Water 150° F.

6 oz. Strong Liquor Ammonia

3 lbs. Proteine Gum

1 noggin Oil

$\frac{1}{2}$ oz. Ultramarine Blue

12 oz. Lampblack.

Mix dry and add to the above

1 gill turpentine.

Put in a water-bath until it has become thin.

No. 237.

* No. 1 BLUE.

VAT.

Take 120 gallon tub; half fill it with Water, and add to it 10 gallons Hot Water. Dissolve in it

30 lbs. Copperas

3 gallons Ground Pulp

4 lbs. Indigo.

Mix well, and add

30 lbs. Slack Lime

Stir well up, and let stand for three to four weeks, when it will be ready for use.

No. 238.

No. 2 BLUE VAT.

120 gallons Water

1 gallon Indigo at 4 lbs.

10 gallons Hot Water. Dissolve

15 lbs. Copperas, and add

15 " Lime.

Stir well, and let stand three or four weeks, when it will be ready for use.

No. 239.

No. 3 BLUE VAT.

120 gallons Water
 10 " Hot Water
 5 lbs. Dissolved Copperas.
 Stir well and let stand four weeks.

No. 240.

No. 4 BLUE VAT.

120 gallons Water
 10 " Hot Water
 3 lbs. Dissolved Copperas.
 Stir well, and let stand four weeks.

No. 241.

TO PRECIPITATE PULP.

40 gallons No. 1 Vat
 $\frac{1}{2}$ gallon Muriate of Tin 120° Twaddle.
 Mix and filter.

No. 242.

40 gallons No. 2 Vat
 $\frac{1}{2}$ gallon Muriate of Tin 120° Twaddle.
 Mix well.

No. 243.

40 gallons No. 3 Vat

$\frac{1}{2}$ gallon Muriate of Tin 120° Twaddle.

Mix well and filter.

You should get about 80 gallons of clear liquor of the tubs, and this you will find to run to about 1 to 8 of Tin 120° Twaddle. Filter to a pulp; you will get about 8 gallons of pulp of 3 tubs. Thicken with 16 lbs. of ground Gum Senegal.

This is for Fast Blues.

No. 244.

1 C. BLACK FOR ORANGES.

4 gallons Logwood 8° Twaddle.

Thicken with 2 lbs. Flour.

4 oz. Bichromate of Potash.

Dissolve in 1 quart of Hot Water 2 lbs. Starch.

Boil $\frac{3}{4}$ noggin Nitrate of Iron 80° Twaddle in 1 pint Oil.

Mix and strain, and put in this

1 gill Oxymuriate of Tin 120° Twaddle.

No. 245.

ULTRAMARINE BLUE, LIGHT.

5 lbs. new Gum Albumen
 3 " Ultramarine Blue. Mix dry.
 10 quarts Cold Water
 1 quart Caustic Soda 10° Twaddle.
 Put in a water-bath heated to 160° F.; stir
 1 hour, let stand all night.
 1 gill Turpentine.
 Strain.

No. 246.

LIGHT PINK, WOOLLEN.

7 pints Sapan Liquor 8° Twaddle
 1 pint Extract of Sapan
 4 oz. Blue Stone
 1 $\frac{1}{4}$ lb. Gum Starch, boil, and when half cold add
 $\frac{1}{4}$ noggin Nitrate of Iron.
 Set 3 gills Oxymuriate of Tin 120° Twaddle
 1 gill Muriate of Iron.
 Mix and strain.

No. 247.

X 6 LIGHT C. BLUE.

2 gallons of Blue 8 C. Blue

 $\frac{1}{2}$ gallon Gum Water $\frac{1}{2}$ " Iron Liquor 24° Twaddle

Mix well and strain.

No. 248.

OXIDE OF TIN.

FOR MADDER PULP ORANGES.

In 2 gallons Hot Water, dissolve

6 lbs. Muriate of Tin Crystals.

In 2 gallons Hot Water, dissolve

 $6\frac{1}{2}$ lbs. Common Soda.

Add your Soda to the Tin; stir well, and wash three times over with cold Water, and through a calico to a pulp.

No. 249.

* 1 X BLUE.

4 gallons of Cold Water

6 lbs. Crystal Starch. Boil and add

4 gallons D. X Blue.

Mix and strain.

No. 250.

4 LB. LAVENDER.

160 lbs. Logwood ground wet

40 gallons best Red Liquor 16° Twaddle.

Warm. Let steep for three or four days,
when it is ready for drawing off.

No. 251.

RED LIQUOR.

4 gallons Hot Water

16 lbs. Ground Alum

19 " White Sugar of Lead.

Dissolve, and add by degrees half a gallon
of the above Water; mix

1 lb. Ground Chalk.

Mix and let settle.

No. 252.

* DARK PASTE ORANGE.

120 lbs. Brown Sugar of Lead

16 gallons Water.

Dissolve and filter; use the clear Liquor.

4 gallons Water, cold

20 lbs. Crystal Starch.

Boil and strain.

No. 253.

* 1 PASTE ORANGE.

20 lbs. Brown Sugar of Lead

16 gallons Water.

Dissolve and filter, and use the clear Liquor.

4 gallons Cold Water

20 lbs. Crystal Starch.

Boil and strain.

No. 254.

9 DARK ORANGE.

36 lbs. Brown Sugar of Lead.

Dissolve in $2\frac{1}{2}$ gallons of Water, and filter.

4 lbs. Starch

 $\frac{1}{2}$ gallon Cold Water.

Boil and strain.

No. 255.

* 2 PASTE ORANGE.

40 lbs. Brown Sugar of Lead

16 gallons Water.

Dissolve and filter, and use the clear Liquor.

4 gallons Cold Water

20 lbs. Starch Crystals.

Add the above and boil.

No. 256.

* 4 PASTE ORANGE.

40 lbs. Brown Sugar of Lead

8 gallons Water.

Dissolve and filter, and use the clear Liquor.

2 gallons Cold Water

10 lbs. Crystal Starch.

Add the above Liquor; and boil and strain.

No. 257.

8 LIGHT ORANGE.

8 lbs. X Brown Sugar of Lead

12 gallons Water.

Dissolve and filter the clear Liquor.

16 lbs. Crystal Starch

4 gallons Cold Water.

Boil and strain.

No. 258.

12 LIGHT ORANGE.

12 lbs. Brown Sugar of Lead

12 gallons Water.

Dissolve and filter the clear Liquor.

16 lbs. Starch Crystals.

Add the above Liquor; boil and strain.

4 gallons Cold Water to Starch.

No. 259.

* G. ORANGE or 4 MADDER ORANGE.

4 gallons Bark Liquor 16° Twaddle

6 lbs. Gum Starch

4 " Sal Ammoniac

1 quart Aluminate of Soda X Standard.

Boil; when half cold add

8 lbs. Muriate of Tin Crystals.

Mix and strain.

No. 260.

* 4 S. ORANGE.

20 lbs. Brown Sugar of Lead; dissolve it in

2½ gallons Hot Water.

Filter off and add

2½ gallons Gum Water.

Mix well and strain.

No. 261.

4 7 SHADE.

1 gallon Oxide Standard

3 gallons, 6 and 3 Buff Standard

2 " Gum Substitute at 10 lbs. per gallon; add

1 gill Logwood Liquor 8° Twaddle

1 " Gum Brown Standard.

Mix well and strain.

No. 262.

* 2 MADDER ORANGE.

4 gallons Bark Liquor 16° Twaddle
 4 lbs. Gum Starch
 2 " Sal ammoniac, boil, add
 2 qts. X Standard
 1 qt. Oxide of Tin Pulp
 6 lbs. Muriate of Tin Crystals.
 Mix well and strain.

No. 263.

* 1 P. GREEN.

1½ gallon Oxide Standard
 ½ " Light Steam Green
 2 gallons Gum Sub. Water.
 Mix and strain.

No. 264.

16 G. C. BLUE.

2 gallons Iron Liquor 24° Twaddle
 2 " Gum Water
 2 " Standard Blue Pulp.
 Mix and strain.

No. 265.

* ANNOTTO ORANGE STANDARD.

4 gallons Caustic Soda 14° Twaddle.

8 lbs. Annotto ; add

2 gallons Water. Boil two hours.

To 14 qts. Liquor, add 2 qts. of X Standard
by degrees, and filter.

No. 266.

* 4 S. ORANGE STEAM.

1 gallon of the above Standard

4 gallons Substitute Water.

Stir well and strain.

No. 267.

4 PASTE BLUE.

7 gallons Water, cold

8 lbs. Crystal Starch, boil

8 oz. Oxalic Acid. Dissolve, and add

1 gallon Blue Pulp

2 gallons Pad Blue Standard.

Mix and strain.

No. 268.

* 8 PASTE BLUE.

7 gallons Cold Water
 8 lbs. Crystal Starch; boil
 8 oz. Oxalic Acid; dissolve
 1 gallon Blue Pulp
 1 pad Blue Standard.
 Mix and strain.

No. 269.

10 PASTE BLUE.

9 gallons Cold Water
 10 lbs. Crystal Starch; boil
 10 oz. Oxalic Acid. Dissolve, and add
 1 gallon Blue Pulp
 1 " Pad Blue Standard.

No. 270.

* 2 LIGHT BLUE.

1 gallon Blue Pulp
 4 gallons 4 P Blue Standard
 12 oz. Oxalic Acid. Dissolve in
 1 qt. Hot Water
 7 gallons Soluble Substitute Water.
 Mix well up and strain.

No. 271.

* 3 LIGHT BLUE.

- 2 gallons Blue Pulp
- 5 " Pad Blue Standard
- $1\frac{1}{2}$ lb. Oxalic Acid. Dissolve in
- 3 qts. Hot Water
- 13 gallons Soluble Substitute Water.
- Mix and strain.

. No. 272.

* 5 LIGHT BLUE.

- 2 gallons Blue Pulp.
- 3 " Pad Blue Standard
- $1\frac{1}{2}$ lb. Oxalic Acid. Dissolve in
- 3 qts. Hot Water.
- 14 gallons Soluble Substitute Water.
- Mix and strain.

No. 273.

* 8 LIGHT BLUE.

- 1 gallon Blue Pulp
- 8 oz. Oxalic Acid. Dissolve in
- 1 qt. Hot Water
- 1 gallon Pad Blue Standard
- $6\frac{3}{4}$ gallons Soluble Substitute Water.
- Mix and strain.

No. 274.

S. N. YELLOW.

ROYAL.

2 gallons Berry Liquor 12° Twaddle.
 2 " Bark Liquor 8° Twaddle
 5 lbs. Starch. Boil, and add
 1 qt. Oxide Tin Pulp; add
 2 qts. best red Liquor 18° Twaddle.
 Mix well, and add
 6 oz. Muriate of Tin Crystals, and strain.

No. 275.

X 1½ B. PURPLE PASTE.

ROYAL.

2 gallons B Purple, and
 3 " Water
 5 lbs. New Flour.
 Boil and strain.

No. 276.

1 NEW BROWN STEAM.

- 8 qts. Bark Liquor 20° Twaddle
- 6 lbs. 3 Gum Substitute
- 18 oz. Alum
- 2 " Chloride of Potash.
- Half boil, and add
- 2 qts. 4 lbs. Lavender Standard
- 2 " Sapan Extract
- 1 qt. Acetate of Tin 6° Twaddle.
- Mix, and strain.

No. 277.

ACETATE TIN.

- 7 pints Water; dissolve in
- 1 pint Muriate of Tin 120° Twaddle
- 2 lbs. White Sugar of Lead.
- Mix, let settle, and use the clear liquor.

No. 278.

R. PURPLE STANDARD.

STEAM.

2 qts. Logwood 8° Twaddle
 2 oz. Oxalic Acid
 1 oz. Chloride Potash
 4 oz. Yellow Prussiate Potash
 4 " Red " "
 4 " Tartaric Acid. Dissolve and add
 1 qt. 4 lbs. Lavender Standard
 1 qt. Red Liquor 16° Twaddle
 3 gills Cochineal Liquor 6° Twaddle.
 Mix well.

No. 279.

3 PUCE STEAM.

1 gallon R. Purple Standard
 3 gallons Substitute Water.
 Mix and strain.

No. 280.

8 PUCE STEAM.

8 gallons Substitute Water
 1 gallon R. Purple Standard
 Mix and strain.

No. 281.

5 M. DRAB TWICE.

IN GARANCINE.

- 33 qts. Sal Ammoniac Standard
- 1 qt. Iron Liquor 24° Twaddle
- 1 " Sumac Liquor 10° Twaddle.
- 1 " 4 lb. Lavender Standard
- 3 qts. Acetate Copper 16° Twaddle
- 30 " Gum Water
- Mix and strain.

No. 282.

W. RED, STEAM.

- 4 qts. Sapan Liquor 8° Twaddle
- 1 qt. Bark Liquor 8° Twaddle
- 2 qts. Water
- 1 qt. X Standard
- 2 oz. Chloride Potash
- 2½ lbs. Starch.
- Boil and strain.

No. 283.

DARK SPIRIT.

PINK WOOLLEN.

2 gallons Sapan Liquor 6° Twaddle
3 lbs. Starch. Boil, and add
2 noggins Nitrate of Iron 84° Twaddle
1 qt. Oxymuriate of Tin 120° Twaddle.
Mix and strain.

No. 284.

DARK SPIRIT.

PURPLE STANDARD.

6 oz. Sal Ammoniac; dissolve it in
6 qts. Logwood Liquor 8° Twaddle
1 noggin Nitrate of Iron 84° Twaddle
1 pint Oxymuriate of Tin 120° Twaddle.
Mix and strain.

No. 285.

W. R. ORANGE.

STEAM.

6 qts. Bark Liquor 8° Twaddle
1 qt. Sapan Extract
 $\frac{1}{2}$ " X Standard
2 $\frac{1}{2}$ lbs. Starch. Boil, and add
1 oz. Chloride of Potash,
When half cool, add
1 oz. Oxalic Acid
 $\frac{1}{2}$ " Muriate of Tin Crystals.
Mix and strain.

No. 286.

No. 2. B. CHOCOLATE.

STEAM.

10 qts. Sapan Extract
5 " 4 lbs. Lavender Standard
1 qt. Logwood Liquor 8° Twaddle
4 oz. Chloride of Potash
4 " Sal Ammoniac
6 lbs. Starch. Boil, and add
1 gallon Acetic Acid 8° Twaddle.
Mix and strain.

No. 287.

2 W. ORANGE N.

- 3 qts. Berry Liquor 12° Twaddle
- 3 " Bark Liquor 8° Twaddle
- 3 " Sapan 8° Twaddle
- 3 lbs. Starch
- 1 pint Red Liquor 16° Twaddle
- 2 oz. Chloride of Potash.
- Boil, and add
- 1 pint X Standard
- 2 pints Oxide of Tin Pulp
- 2 oz. Oxalic Acid.
- Stir well and strain.

No. 288.

W. MYRTLE GREEN.

STEAM.

- 4 gallons Bark Liquor 20° Twaddle
- 6 lbs. Starch
- 2 " Alum. Boil, and add
- 8 oz. Muriate of Tin Crystals
- 6 lbs. Super-Sulphate of Potash
- 8 " Yellow Prussiate of Potash
- 2 qts. Logwood Standard.
- Mix and strain.

No. 289.

W. CHOCOLATE.

STEAM.

3 gallons Logwood Standard
1 gallon Bark Liquor 8° Twaddle
4 gallons Sapan Extract
12 lbs. Starch
1½ gallon Red Liquor 16° Twaddle
6 oz. Chloride of Potash.
Boil, and add
4 oz. Red Prussiate of Potash
6 " Yellow " "
Mix and strain.

No. 290.

* 4 N. BROWN.

2 gallons of 2 M. Brown
2 " Substitute Water
3 gills Acetate of Tin 6° Twaddle
4 oz. Alum
¼ oz. Chloride of Potash.
Mix and strain.

No. 291.

* LIGHT ULTRAMARINE.

BLUE STEAM.

8 lbs. Albumen Gum, Ferguson
 4 lbs. Ultramarine Blue
 6 qts. Water 110° Fahr.
 1 gill Turpentine
 1 pint of Gum Water, 18 oz. per gallon
 4 qts. Gum Dragon Water, 6 oz. per gallon.
 Let stand all night, and strain.

No. 292.

NEW ORANGE FOR ULTRAMARINE.

This is to work with Ultra.

2 $\frac{1}{4}$ lbs. Litharge and Blue
 4 lbs. White Sugar of Lead
 6 gallons Water. Boil down to 1 gallon and
 add
 1 $\frac{1}{2}$ lb. Chrome.
 Let stand two hours, and filter; wash three
 times over, and put in a pan, and add one-half
 gallon Caustic Soda 8° Twaddle; let it stand
 one hour, take out, and wash three times over
 again, and filter.

No. 293.

S. C. NEW ORANGE.

3 qts. of the above

1 quart Water

1 lb. Starch.

Boil well and strain.

No. 294.

* STEAM BROWN STANDARD.

24 lbs. Catechu. Boil and add

1½ lb. Sal Ammoniac

1½ " Pearlash. Dissolve.

Measure to 6 gallons, and filter.

12 lbs. 3 Gum Substitute heated to 180°.

Strain, and add

1 qt. Acetic Acid 8° Twaddle

½ " Nitrate of Copper 77° Twaddle.

No. 295.

3½ F. BROWN.

1 gallon Steam Brown Standard

3 gallons Substitute Water

½ gallon Water

¼ " Acetate of Copper 16° Twaddle.

Mix and strain.

No. 296.

D. S. BLUE NEW—BLUE ROYAL.

STEAM.

4 gallons Cold Water
 12 lbs. Starch
 4 " Sal Ammoniac. Boil, and add
 4 gallons Blue Pulp
 12 lbs. Super Sulphate of Potash
 12 " Yellow Prussiate of Potash
 4 " Red " "
 Mix and strain.

No. 297.

PLUM SHADE.

STEAM.

6 gallons Sapan Extract
 2 " 2 L. Blue
 1 gallon B. Purple Standard.
 Thicken with Substitute; mix and strain.
 10*

No. 298.

N. 3 YELLOW.

STEAM.

1 gallon Bark Liquor 8° Twaddle

1 $\frac{1}{4}$ lb. Starch

3 oz. Alum

2 " White Sugar of Lead.

Boil and add

3 oz. Muriate of Tin Crystals.

Mix and strain.

No. 299.

2 PLUM SHADE.

STEAM.

6 gallons Sapan Extract

3 " 2 L. Blue

2 " B. Purple Standard

22 lbs. 3 Gum Substitute Water.

Mix and strain.

No. 300.

3 W. ORANGE LAST.

STEAM.

- 1 gallon Berry Liquor 12° Twaddle
- 1 " Bark Liquor 8° Twaddle
- 1 " Sapan Liquor 8° Twaddle
- 4 lbs. Starch
- 9 oz. White Sugar of Lead.
- 1 qt. Standard. Boil, and add
- 6 oz. Muriate of Tin Crystals.
- Mix and strain.

No. 301.

C. STANDARD YELLOW.

- 2 gallons Bark Liquor 12° Twaddle
- 3 lbs. Starch
- 4 oz. White Sugar of Lead
- 1 qt. Red Liquor 16° Twaddle.
- Boil and add
- 6 oz. Muriate of Tin Crystals.
- Mix and strain.

No. 302.

* N. 16 GREEN.

STEAM.

13 gallons Berry Liquor 16° Twaddle

16 lbs. Alum

1 gallon Acetic Acid, brown

 $\frac{1}{2}$ " Muriate of Tin 120° Twaddle

13 gallons Substitute Water.

No. 303.

7 DARK GREEN.

STEAM.

9 gallons Bark Liquor 12° Twaddle

12 lbs. Starch

 $2\frac{1}{4}$ " Alum. Boil and add

8 " Super Sulphate of Potash

9 oz. Muriate of Tin Crystals

14 lbs. Yellow Prussiate of Potash.

Mix and strain.

No. 304.

* S. BLUE.

STEAM.

- 4 gallons Cold Water
- 15 lbs. Starch
- 4 " Sal Ammoniac. Boil and add
- 8 " Super Sulphate of Potash
- 6 " Tartaric Acid
- 4 gallons Blue Pulp
- 4 oz. Oxalic Acid: dissolve in
- 1 pint Hot Water, and add
- 13 lbs. Yellow Prussiate of Potash
- 3 " Red " "
- Mix and strain.

No. 305.

S. BLUE.

STEAM.

- 4 gallons Cold Water
- 14 lbs. Starch
- 3 " Sal Ammoniac, boil
- 6 " Tartaric Acid
- 6 " Super Sulphate of Potash
- 4 gallons Blue Pulp
- 8 oz. Oxalic Acid: dissolve in
- 1 pint Water.
- 13 lbs. Yellow Prussiate of Potash
- 3 " Red " "
- Mix and strain.

No. 306.

BLACK FOR WOOLLEN.

3 gallons Logwood Liquor 8° Twaddle

5 lbs. New Flour

3 oz. Yellow Prussiate.

Boil. When half cold add

6 gills Nitrate of Iron 80° Twaddle

2 " Acetate Copper 16° Twaddle

Mix and strain.

No. 307.

DARK ULTRAMARINE BLUE.

10 lbs. Ferguson Gum

12 " Ultramarine Blue. Mix.

6 qts. Water 100° Fahr.

2 " A. Soda

1 pint Turpentine

1 gallon 1 lb. Glue Water.

Let steep all night. Strain.

No. 308.

8 T. PASTE.

1 gallon Water

1 lb. Starch. Boil and add

6 oz. Muriate of Tin Crystals.

Mix and strain.

No. 309.

* NEW FINISHING.

BLUE.

8 gallons Hot Water
 8 lbs. Yellow Prussiate
 2 qts. Nitrate of Iron 84° Twaddle
 2 " Vitriol 166° Twaddle
 2 " Red Orchil
 . Wash till all the acid is out, and add 6 oz.
 Oxalic acid.

No. 310.

PAD BLUE FOR PRINTING.

STEAM.

4 gallons Cold Water
 14 lbs. Starch. Boil and add
 3 " Sal Ammoniac
 14 " Tartaric Acid. Dissolve in
 4 gallons Blue Pulp
 8 oz. Oxalic Acid. Dissolve
 1 qt. Hot Water
 14 lbs. Yellow Prussiate
 2 " Red "
 Mix and strain.

No. 311.

5 NEW CHOCOLATE.

STEAM.

4 gallons Bark Liquor 10° Twaddle
2 " Sapan Extract
1 gallon 4 lbs. Lavender
8 oz. Alum
2 " Chloride of Potash
12 lbs. Starch. Boil, and add
1 gallon P. Purple Standard.
Mix well and strain.

No. 312.

* * 12 CHINA LAST.

BLUE.

1½ gallon Water.
1½ " Iron Liquor 24° Twaddle
2 gallons Pulp Standard
6 lbs. New Flour.
Boil. When half cold add
10 oz. Muriate of Tin Crystals.
Mix and strain.

No. 313.

W. ORANGE.

STEAM.

$2\frac{1}{4}$ gallons Berry Liquor 12° Twaddle
 $\frac{3}{4}$ gallon Sapan Liquor 8° Twaddle.
 4 lbs. Starch. Beat up and add
 12 oz. White Sugar of Lead, boil, and add
 1 qt. X Standard
 When half cold add
 8 oz. Muriate of Tin Crystals.
 Mix and strain.

No. 314.

* 41 P. BLUE.

$1\frac{1}{2}$ gallon Water.
 $2\frac{1}{2}$ lbs. Starch. Boil, and add
 6 gallons Pad Blue
 Mix and strain.

No. 315.

* WOOD RED.

STEAM.

5 gallons Sapan Liquor 8° Twaddle
1 gallon Berry Liquor 10° Twaddle
1 gallon X Standard
12 lbs. Starch. Boil and add
4 oz. Chloride of Potash
Mix and strain.

No. 316.

R. B. PASTE STANDARD.

40 lbs. Sulphate of Zinc. Dissolve in
5 gallons Hot Water, and add
20 lbs. White Sugar of Lead.
Stir till dissolved, and let settle. Use clear
liquor.

No. 317.

R. B. PASTE.

1 gallon of the above Liquor
3 lbs. 3 Gum Substitute.
Heat to 180°, and strain.

DELAINE COLORS.

DONE AT BARROW.

No. 1.

DELAINE BLACK FOR BLACK AND LAVENDERS, &c.

20 lbs. British Gum. Beat up with
3½ gallons Logwood Liquor 12° Twaddle
2 qts. Acetic Acid
2 lbs. Prussiate of Potash
2 qts. Oil. Boil well and lade out; when
nearly cold add
2 qts. Iron Liquor
1 qt. Nitrate of Iron
1 " Muriate of Iron
2 qts. Extract of Indigo.

No. 2. •

DELAINE YELLOW.

- 20 lbs. British Gum
- 4 gallons Berry Liquor 16° Twaddle
- 1 qt. Cochineal Liquor 12° Twaddle.
- 1 " Oil. Boil well and lade.
- When nearly cold add
- 1 lb. Oxalic Acid
- 1 " Tin Crystals
- 1 noggin Oxymuriate of Tin.

No. 3.

DELAINE DARK BLUE.

- 12 lbs. Starch
- 5 gallons Water
- 1 gallon Gum Dragon. Boil well
- 1 gill of Muriate of Iron to darken
- 2 lbs. Oxalic Acid.
- Dissolve in a little Water
- 10 lbs. Tartaric Acid
- 4 " Red Prussiate
- 8 " Prussiate of Potash.
- When dissolved add
- 10 qts. of Tin Pulp

No. 4.

TIN PULP.

Take 24 lbs. Yellow Prussiate, dissolve in 5 gallons of Water (Hot), when dissolved put it in a 100 gallon tub, and add 6 gallons of Cold Water, and stir up; then add $3\frac{1}{2}$ gallons of Muriate of Tin, and keep stirring while the Tin is put in; after the addition of the Tin, fill up with Cold Water, and stir well; then let it settle; and draw the water off; fill up again, and again let it settle; repeat this three times; and then strain for use.

No. 5.

DELAINE DARK GREEN.

14 lbs. Starch

6 gallons Bark Liquor 12° Twaddle.

Boil and cool.

4 oz. Tin Crystals

4 lbs. Alum

10 " Prussiate of Potash

6 " Tartaric Acid

4 qts. Extract of Indigo

6 " Tin Pulp.

No. 6.

STRONG P. RED.

8 lbs. Starch

5½ gallons Cochineal Liquor 12° Twaddle

2 qts. of Oil. Boil well and lade

2 " Berry Liquor 16° Twaddle.

When nearly cold add

1½ lb. Oxalic Acid

1¾ " Tin Crystals. Stir very well.

No. 7.

A VERY GOOD DELAINE CHOCOLATE.

NO. 1.

22 lbs. Starch

2 " British Gum Pale

3½ gallons Sapan Liquor

11 qts. Bark Liquor 12° Twaddle

1 gallon Logwood Liquor 12° Twaddle

2½ gallons Nitrate of Alumina

2 qts. Oil

10 oz. Chlorate of Potash. Boil well, and turn steam off.

2¾ oz. Red Prussiate

12 " Tartaric Acid

5 gills of Lime Juice. Stir up well and boil again.

No. 8.

NO. 2 CHOCOLATE, GOOD FOR LIGHT
DELAINES.

46 lbs. British Gum
3½ gallons Sapan Liquor 12° Twaddle
23 “ Bark Liquor 12° Twaddle
6 qts. Nitrate of Alumina
1 gallon Red Liquor
2 gallons Logwood Liquor 12° Twaddle
1 lb. Chlorate of Potash
2 qts. of Oil. Boil well, turn steam off. Add
3¾ lbs. Red Prussiate
10 oz. Tartaric Acid.

No. 9.

DELAINE CHOCOLATE DARK.

20 lbs. British Gum
2 gallons Sapan Liquor 12° Twaddle
1 gallon Bark Liquor 12° Twaddle
1 “ Logwood Liquor 12° Twaddle
1 “ Nitrate of Alumina
6 oz. Chlorate of Potash
2 qts. of Oil. Boil well, turn steam off. Add
1¾ qt. Red Prussiate
6 oz. Tartaric Acid
5 noggins of Lime Juice.

N. B. The Lime Juice and Tartaric Acid

assist the above Chocolate to wash off soft; as a general rule No. 1 Chocolate is the best. The following is a very Red Chocolate to mix with gale shades for blotche.

No. 10.

DELAINE PALE R. R. CHOCOLATE.

40 lbs. Starch

13 gallons Sapan Liquor 12° Twaddle

4 lbs. British Gum

1 gallon Bark Liquor 12° Twaddle

1 " Logwood Liquor 12° Twaddle

5 gallons Nitrate of Alumina

2 qts. Oil

1 $\frac{1}{4}$ lb. Chlorate of Potash. Boil and turn steam off.

5 lbs. Red Prussiate

1 $\frac{1}{2}$ lb. Tartaric Acid

7 pints Lime Juice.

No. 11.

DELAINE R. R. CHOCOLATE.

- 20 lbs. Starch
- 4 " British Gum
- 5½ gallons Sapan Liquor 12° Twaddle
- 1 gallon Bark Liquor 12° Twaddle
- 1 " Logwood Liquor 12° Twaddle
- 2½ gallons Nitrate of Alumina
- 10 oz. Chlorate of Potash
- 3 pints Oil. Boil and turn steam off.
- 2 lbs. Red Prussiate
- 1 lb. Tartaric Acid
- 3 pints Lime Juice.
- Boil, stir, and strain.

No. 12.

DELAINE DARK CHOCOLATE B.

- 40 lbs. Starch
- 10 " British Gum
- 5½ gallons Sapan Liquor 12° Twaddle
- 5½ " Bark Liquor 12° Twaddle
- 4 " Logwood Liquor 12° Twaddle
- 5 " Nitrate of Alumina
- 1½ lb. Chlorate of Potash
- 3 quarts Oil. Boil and turn steam off.
- 1½ lb. Tartaric Acid
- 3 qts. Lime Juice.
- Boil, stir, and strain.

No. 13.

YELLOW STANDARD FOR LIGHT
GREEN STANDARD.

20 lbs. British Gum
3 gallons Berry Liquor 16° Twaddle
1 gallon Bark Liquor 12° Twaddle
5 lbs. Alum
2 qts. Oil.
Boil and lade.

No. 14.

BLUE STANDARD FOR GREEN
STANDARD.

2 gallons Gum Senegal
3 gills Muriate of Tin. Put this into one
mug.

Then in another mug put
20 lbs. Prussiate of Potash

6 " Alum

3 " Oxalic Acid. Dissolve in

4 gallons Hot Water.

Add the contents of the mug containing the
Senegal, &c., to the other very gradually; let
some one stir the mixture round briskly.

No. 15.

DELAINE PALE GREEN STANDARD.

6 gallons of the Yellow Standard
 1 gallon Extract of Indigo, 13 lbs.
 4½ gallons of the Blue Standard.

No. 16.

DELAINE PALE GREEN COLOR

No. 3, 3½.

3 gallons Gum Substitute
 3½ " Green Standard.

No. 17.

DELAINE GREEN LIGHT 1, 2.

2 gallons Green Substitute
 4 " Green Standard.

No. 18.

DELAINE PALE BLUE.

- 4 gallons Gum Substitute
- 1 gallon Gum Senegal
- 2 gallons Dark Blue
- 1 quart of Tin Pulp
- 1 pint Extract of Indigo
- 1½ noggin of Vitriol. When cold add
- 2 gallons of Gum Substitute.
- Stir well and strain.

No. 19.

ANOTHER LIGHT BLUE.

- 2 gallons Gum Senegal
- 1 gallon Gum Substitute
- 1 " Dark Blue
- 1 pint Extract of Indigo
- 1 gill of Vitriol.

No. 20.

DELAINE ORANGE (No. 1).

- 7 lbs. Starch
- 2 gallons Berry Liquor 16° Twaddle
- 1 gallon Water
- 1 " Cochineal 12° Twaddle
- 3 pints Oil.
- Boil well, lade, and stir until cold. Add
- 1 lb. Oxalic Acid
- 1 " Tin Crystals.
- Stir well and strain.

No. 21.

ANOTHER ORANGE (No. 2).

- 10 lbs. Starch.
- 3 gallons Berry Liquor 16° Twaddle
- 2 gallons Water
- 1 gallon Cochineal 12° Twaddle
- 2 qts. Oil.
- Boil well, and when nearly cold add
- 1½ lb. Oxalic Acid
- 1½ " Tin Crystals.
- No. 2 Orange is used for light work, and also to mix with Brown Standard.

No. 22.

DELAINE BROWN STANDARD.

10 lbs. British Gum

4 quarts Berry Liquor 16° Twaddle

6 " Logwood Liquor 12° Twaddle

2 " Cochineal 12° Twaddle

1 quart Oil.

Boil well, and lade. When nearly cold add

12 oz. Oxalic Acid

12 " Tin Crystals.

Stir well.

Then take

3 gallons of the above Standard

1 gallon of No. 2 Orange.

Stir well for mixing.

No. 23.

No. 3 BROWN.

3 gallons Gum Substitute

1 gallon of the above.

No. 24.

ANOTHER BROWN STANDARD.

22 lbs. British Gum
 10 quarts Berry Liquor 16° Twaddle
 10 " Logwood Liquor 12° Twaddle
 4 " Cochineal 12° Twaddle
 2 " Oil.

Boil, and lade, and when nearly cold add
 1½ lb. Oxalic Acid
 1½ " Tin Crystals.

Then take
 5 gallons of the above Standard
 1 gallon of No. 2 Orange.

No. 25.

No. 4 BROWN.

4 gallons Gum Substitute
 1 gallon of the above Standard.

No. 26.

ANOTHER BROWN STANDARD.

- 32 lbs. British Gum
- 4 gallons Bark Liquor 12° Twaddle
- 1½ gallon Sapan Liquor 12° Twaddle
- 2 gallons Nitrate of Alumina
- 2 quarts Logwood Liquor 12° Twaddle
- 2 " Oil.

Boil well and turn steam off. Add
1 lb. Red Prussiate
1 pint Lime Juice.

No. 27.

LIGHT BROWN.

- 1 gallon Gum Substitute
- 1 " of the above Standard.

No. 28.

Y. BROWN STANDARD.

- 2 quarts of No. 36 Dark Brown Standard
- 2 " of No. 2 Delaine Yellow.

No. 29.

Y. BROWN.

- 2 gallons Gum Substitute
- 1 gallon of the above Standard.

No. 30.

WOOD COLOR.

- 7 lbs. Starch
- 9 quarts Berry Liquor 16° Twaddle
- 3 " Sapan Liquor 12° Twaddle
- 2 " Logwood Liquor 12° Twaddle
- 12 oz. Red Prussiate
- 3 noggins of Lime Juice
- 1 quart Oil.

No. 31.

BLACK FOR LIGHT DELAINE.

- 16 lbs. British Gum
- 2 gallons Purple Standard
- 2 " Water
- 5 oz. Chlorate of Potash
- 3 pints Oil.
- Boil well, and lade when nearly cool
- 1 quart Extract of Indigo.

12*

No. 32.

PURPLE STANDARD.

6 quarts Calico Purple Standard

1 quart Extract of Indigo.

Boil together, and add to the other

6 qts. more of Calico Purple Standard

5 oz. Chlorate of Potash.

No. 33.

No. 12 PURPLE.

6 gallons Gum Substitute

$\frac{1}{2}$ gallon of the above Standard.

No. 34.

No. 16 PURPLE.

8 gallons Gum Substitute

$\frac{1}{2}$ gallon of the above Purple Standard.

No. 35.

No. 7 PURPLE.

7 gallons Gum Substitute

1 gallon of the above Standard.

No. 36.

DARK PURPLE.

24 lbs. British Gum
 3 gallons Water .
 3 " of the above Standard.

No. 37.

LAVENDER.

10 gallons Gum Substitute
 $\frac{1}{2}$ gallon Purple Standard
 3 pints of Pale Blue.

No. 38.

No. 8 RED.

19 lbs. Starch
 5 $\frac{1}{2}$ gallons Cochineal 8° Twaddle
 2 quarts Berry Liquor 16° Twaddle
 2 quarts of Oil.
 Boil well, and lade. When nearly cold add
 1 $\frac{1}{2}$ lb. Oxalic Acid. Stir well. Add
 1 $\frac{3}{4}$ " Tin Crystals.

No. 39.

BLACK FOR BLACK AND WHITE.

- 28 lbs. Starch
- 13 gallons Logwood 12° Twaddle
- 2 " Nitrate of Alumina
- 2 " Iron Liquor
- 2 " Oil
- 2½ lbs. of Prussiate.
- Boil well, and turn steam off. Add
- 5 quarts Extract of Indigo
- 5 " Muriate of Iron
- 5 " Nitrate of Iron.

No. 40.

ANOTHER GOOD BLACK.

- 13 lbs. Starch
- 4 " British Gum
- 6½ gallons Logwood Liquor 12° Twaddle
- 2 " Iron Liquor
- 1 gallon Acetic Acid
- 1 " Oil
- 1 lb. 6 oz. Red Prussiate.
- Boil and turn steam off. Add
- 2 quarts Muriate of Iron
- 2 " Nitrate of Iron.

No. 41.

ANOTHER BLACK.

- 6½ gallons Logwood Liquor 12° Twaddle
- 2 " Iron Liquor
- ½ gallon Acetic Acid
- ½ " Vinegar
- 1¼ lb. Red Prussiate
- 1½ " Chlorate of Potash
- ½ gallon Extract of Indigo
- 1 " Oil.

Boil well, and when nearly cool add
 ½ gallon Muriate of Iron.

No. 42.

PINK.

- 2 gallons Spirit of Ammonia
- 11 lbs. of Cochineal (black)
- 4 gallons of boiling Water. Stand 24 hours
 and filter; take the grains, and add 4 gallons
 of boiling Water; boil half an hour; take it
 off and filter, and make it into 8 gallons alto-
 gether, and add
- 30 lbs. of best White Gum Senegal
- 8 " Alum
- 4 " Cream of Tartar
- 1 qt. Oil
- 4 oz. Oxalic Acid.
- Mix well.

No. 43.

DRAB STANDARD.

B. STANDARD.

2 lbs. Prussiate of Potash
1 lb. Oxalic Acid. Dissolve in
3 qts. boiling Water
1 qt. Nitrate of Alumina.

No. 44.

Y. STANDARD.

1 gallon Berry Liquor 16° Twaddle
1 pint Extract of Indigo
1 gallon B. Standard
3 quarts Purple Standard.
Stir well.

No. 45.

No. 7 DRAB.

7 gallons Gum Substitute
1 gallon Y. Standard.

No. 46.

PALE BLUE.

2½ gallons Dark Blue
2 " Gum Senegal
1 pint Extract of Indigo
1 gill Vitriol
4 gallons Gum Substitute

No. 47.

B. GREEN STANDARD.

3 quarts Green Standard, viz. A 11
1 quart Blue Standard for Green 11.

No. 48.

B. GREEN COLOR.

3 gallons Gum Substitute
1 gallon of the above Standard.

No. 49.

B. LIQUOR.

- 2 lbs. Oxalic Acid
 - 4 " Prussiate of Potash
 - 6 quarts boiling Water
 - 2 " Nitrate of Alumina.
- Mix well.

No. 50.

DRAB STANDARD.

- 1 quart Extract of Indigo
 - 5 quarts B. Liquor
 - 6 " Purple Standard (calico)
 - 9 " Berry Liquor 16° Twaddle.
- Stir well.

No. 51.

DARK DRAB.

- 6 gallons Gum Substitute
- 1 gallon of the above Drab Standard.

No. 52.

No. 16 DRAB.

8 gallons Gum Substitute
2 quarts Drab Standard.

No. 53.

No. 11 DRAB.

6 gallons Gum Substitute
2 quarts Drab Standard.

No. 54.

No. 10 DRAB.

5 gallons Gum Substitute
2 quarts Drab Standard.

No. 55.

GUM SUBSTITUTE.

4 lbs. British Gum
1 gallon Water.

No. 56.

GUM SENEGAL.

6 lbs. Gum Senegal

1 gallon Water.

No. 57.

BLUE STANDARD FOR PADDING.

21 lbs. Prussiate of Potash

21 " Tartaric Acid.

Reduce to shade.

No. 58.

BLUE FOR PADDING.

4 gallons of the above

2 quarts of Extract

20 gallons Water.

No. 59.

PALE RED FOR DARK RED.

8 qts. of Hervey's Pale Red

1 qt. of No. Bark Liquor.

No. 60.

DARK RED.

14 lbs. Starch

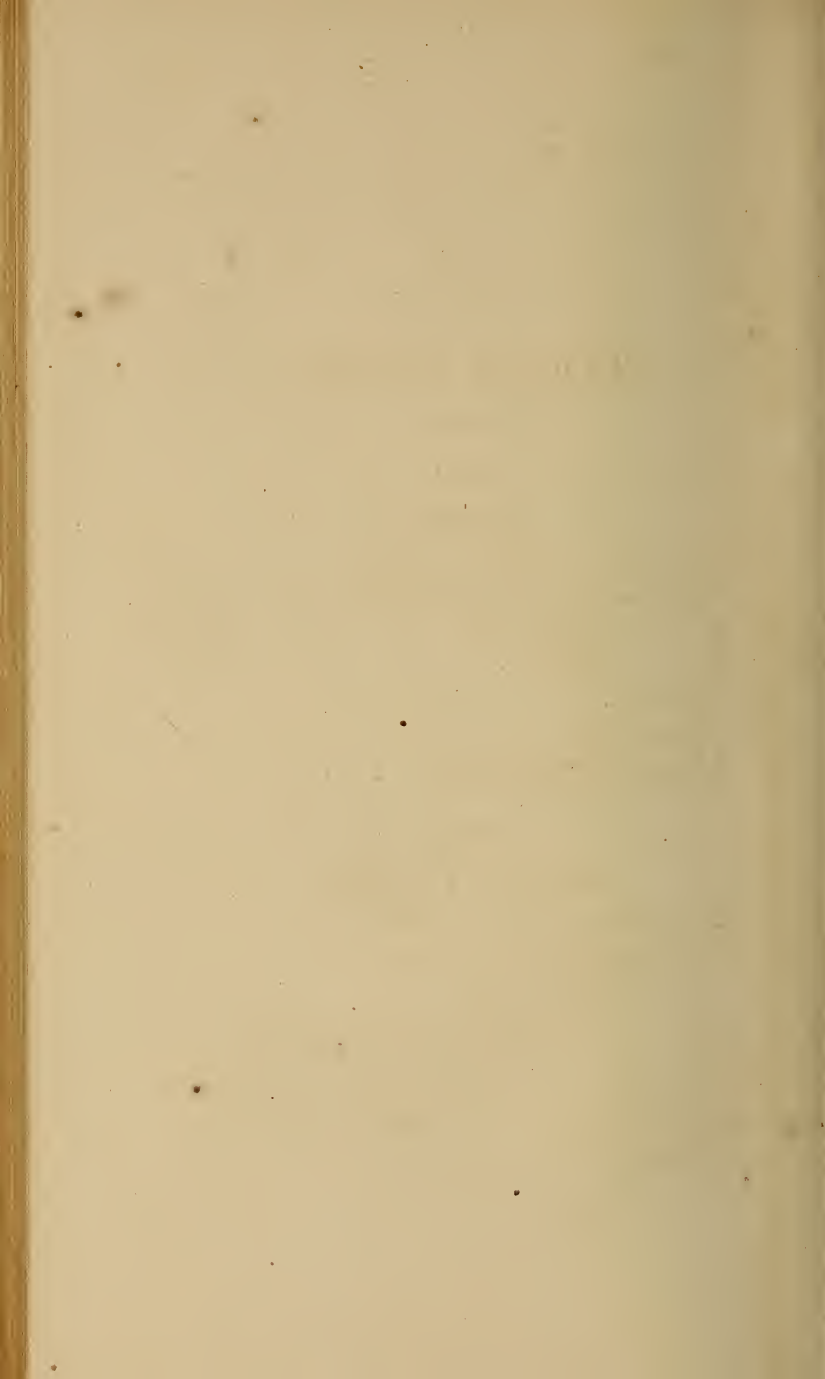
6 $\frac{1}{2}$ gallons Cochineal Liquor 12° Twaddle

2 " of the above Pale Red Standard

2 qts. Oil.

Boil well, and add

2 qts. Berry Liquor 16° Twaddle. When
cool add2 $\frac{1}{2}$ lbs. Oxalic Acid2 $\frac{1}{2}$ " Tin Crystals.



MADDER COLORS.

No. 1.

BLACK.

24 lbs. Flour. Beat it up with
3 gallons Purple Fixing Liquor
3 " Iron Liquor
3 " Water
3 pints Oil.
Dilute with
1 quart Logwood Liquor.

No. 2.

MADDER TIN RED.

28 lbs. Flour. Beat it up with
11 gallons Resist Red Liquor
1 gallon Sapan Liquor
1 gill Chrome Liquor at 1 lb. per gallon.
Boil well; when nearly cold add 12 oz. of
Tin Crystals per gallon of color. For throw-
ing off No. 2 Chocolate dissolve 1 lb. of Tin
per gallon of color.

No. 3.

No. 15 ACID.

18 lbs. of Hervey's No. 2 Dark British Gum
3 gallons Lime Juice 20° Twaddle.
1 quart Oil.
Boil well.

No. 4.

No. 40 ACID.

24 lbs. Dark British Gum. Beat it up with,
4 gallons Lime Juice 40° Twaddle
1 quart Oil.
Boil well.

No. 5.

BLACK AND WHITE ACID.

26 lbs. Pale British Gum. Beat it up with
1 gallon Water
7 gallons Lime Juice 40° Twaddle
2 qts. Oil. Boil well and add
2½ lbs. Oxalic Acid.

You may thicken with 10 lbs. best Wheat
Starch instead of the Gum.

No. 6.

No. 2 CHOCOLATE.

24 lbs. British Gum
 4 gallons Red Liquor
 2 " Iron Liquor
 1 pint Bark Liquor
 1 quart Oil.
 Boil well.

No. 7.

No. 3 CHOCOLATE.

16 lbs. British Gum
 3 gallons Red Liquor
 1 gallon Iron Liquor
 1 pint Bark Liquor
 1 " Oil.
 Boil well.

No. 8.

No. 12 CHOCOLATE.

24 lbs. Flour
 12 gallons Red Liquor
 1 gallon Iron Liquor
 2 qts. Logwood Liquor
 2 " Oil.

No. 9.

No. 8 PURPLE.

36 lbs. Pale British Gum
7 gallons Water
1 gallon Purple Fixing Liquor
1 " Iron Liquor
2 qts. Logwood Liquor
1 qt. Oil.

No. 10.

No. 32 PURPLE.

36 lbs. Pale British Gum
7 gallons Water
1 quart of Purple Fixing Liquor
1 " Iron Liquor
1 pint Logwood Liquor
1 qt. Oil.

N. B. If you want to use Ageing Liquor for any of these colors, you must thicken it with $1\frac{1}{2}$ lb. of British Gum per gallon, to be used in the following proportion:—

For No. 8 Purple, 3 pts. per gallon

" No. 2 Chocolate, 3 pts. per gallon

" No. 12 Black, 5 qts. per gallon.

No. 11.

CATECHU BROWN.

24 lbs. Catechu

6½ gallons Water

6 qts. Acetic Acid. Dissolve, strain, and add

3 " Nitrate of Copper 88° Twaddle

1 qt. Acetate of Copper.

Boil 45 minutes; settle and strain; thicken with Gum Senegal at 5 lbs. per gallon.

No. 12.

ACETATE OF COPPER.

2 lbs. White Sugar of Lead

4 " Blue Stone

1 gallon boiling Water.

No. 13.

No. 12 RED.

24 lbs. Flour

8 gallons Common Red Liquor

3 " Water

1 gallon Sapan Liquor

1 oz. Chrome

2 qts. Oil.

Boil well.

No. 14.

RED STANDARD.

32 lbs. Alum

34 " White Sugar of Lead

8 gallons boiling Water.

Settle.

No. 15.

No. 8 PINK.

8 gallons Gum Substitute

1 gallon of the above Red Liquor

1 pint Berry Liquor.

Stir up well.

No. 12 pink, 14, 16, 20, 24, are made in the same way.

No. 16.

ACID FOR CUTTING PINKS.

2 qts. of Vitriol

6 " Oxymuriate of Tin.

No. 17.

RED PASTE FOR BLOCKING.

20 lbs. Pale British Gum

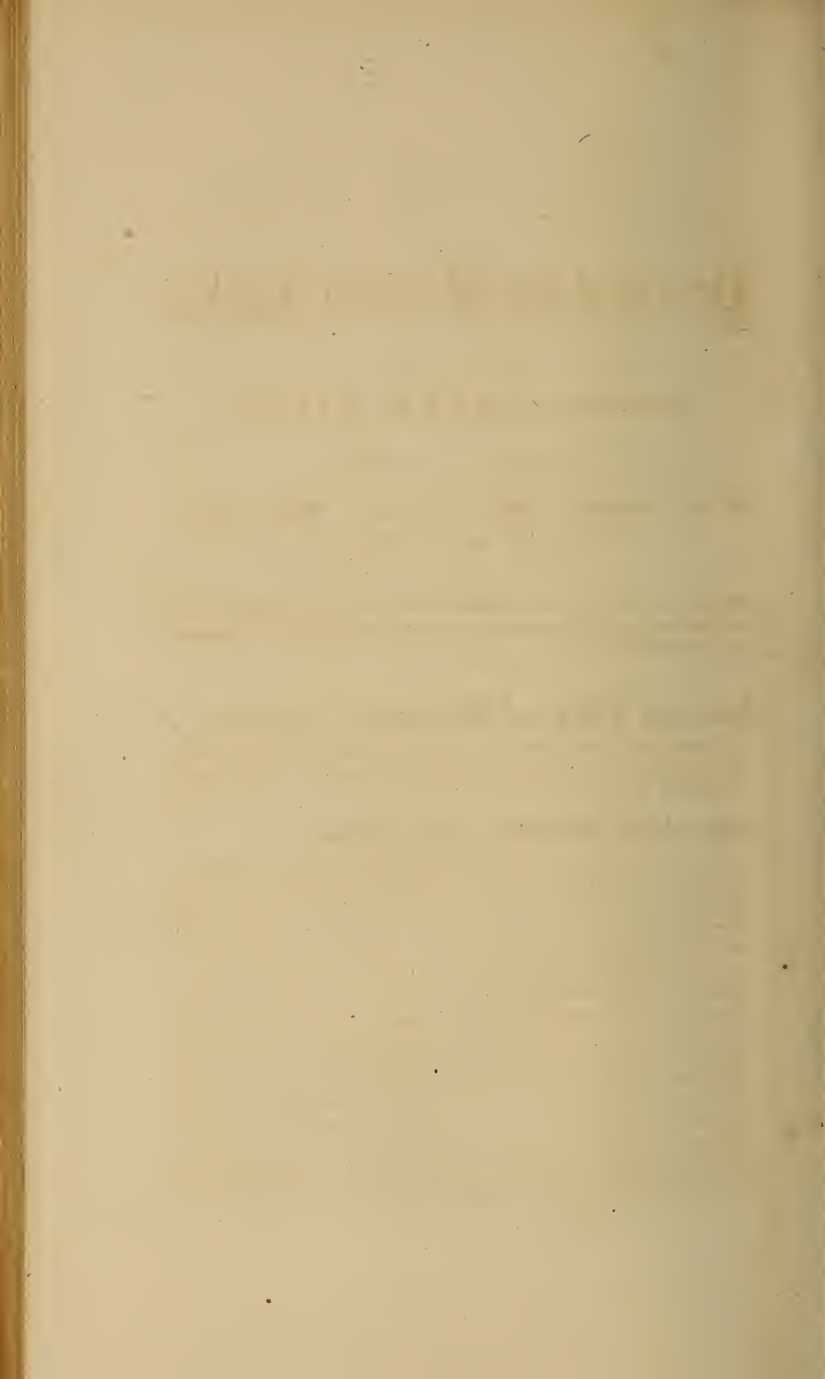
6 " Flour

4½ gallons Red Liquor

4 " Water

2 qts. Sapan Liquor

½ oz. Chrome.



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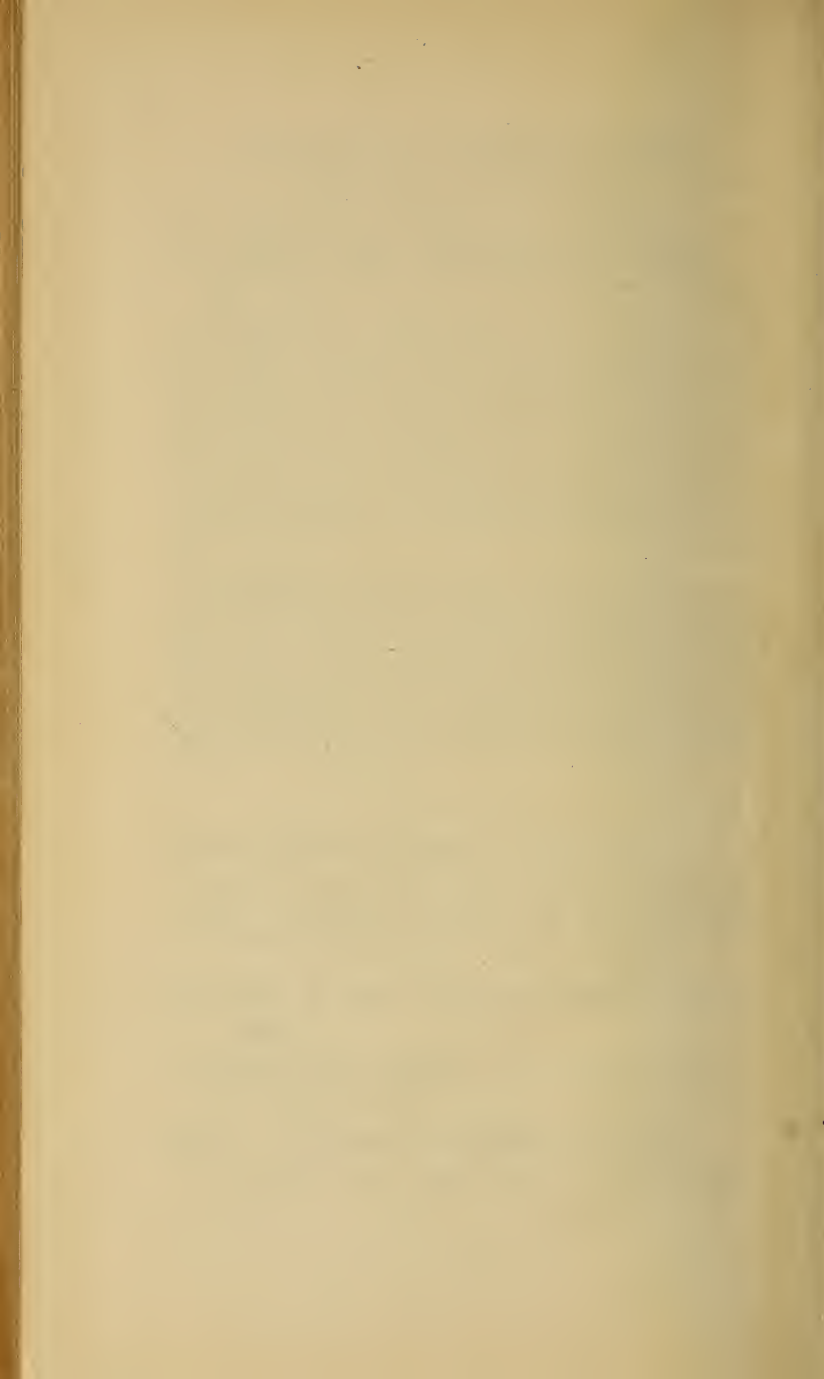
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